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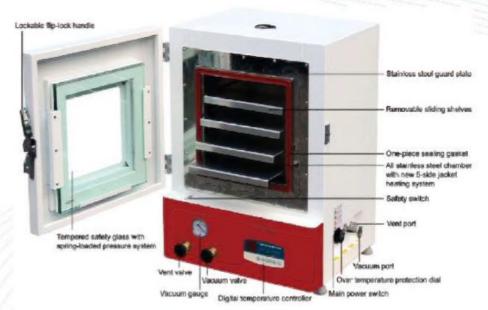
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"For psychedelics to be effective, it's essential that they are taken with the right mindset, in a relaxed and quiet setting conducive to healing."

–Psychedelics Saved My Life, page 100

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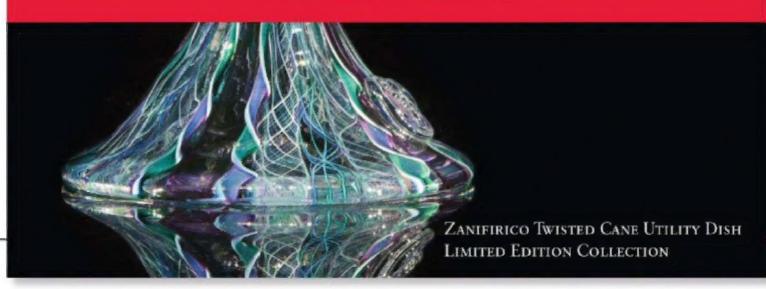
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The former Texas congressman and three-time presidential candidate tells *High Times* that it's time to legalize marijuana and free pot prisoners. *By Chris Simunek*







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HIGHTIMES



High Tweets

With 435K followers on Twitter, we get a lot of amazing tweets! Here are the top three for this month:

@bobmarley: 38 yrs ago today, @HIGH_TIMES_Mag published its legendary interview w/ Bob! bit.ly/HighTimes76 #TodayInBobsLife

@yepitstai: You know its real when all your fave collectives are shut down for the weekend in prep of @HIGH_TIMES_Mag cannabis cup! #mmj #pnw #htcc

@MaximMag: In the era of legalization, **@HIGH_TIMES_Mag** is giving the people what they want and then some.



The Best Job in the World

Every week, we get high, look for cool vids online and then pick the best "5 Videos to Watch When Baked." It's like Saturday-morning cartoons for stoners! Check it out weekends in the Lounge section at *hightimes.com*.



POT POLL

What Should the Legal Marijuana Market Look Like?

Two states have legalized recreational weed, and new ones are greenlighting medical cannabis on what almost seems like a monthly basis. Recent polls

have noted that three out of four Americans feel certain that, whether or not they support it, marijuana will soon be legalized across the nation. So we asked: "Legalized Marijuana—What's Your Preference?" Here are the answers:



Cast your vote in our latest poll online!



Contest

Show off your marijuana ink! Instagram your weed tattoo with #lovetheleafink. We'll give whoever gets the most likes a HoodLamb Men's furry hoodie! Watch this space for the winner in next month's mag.

Stoner Selfie

In the three weeks before our U.S. Cannabis Cup in Seattle, we held a competition that asked you for your best stoner selfie. Each week, we picked a photo from Twitter, Instagram or Facebook that had the most likes. Every winner scored two VIP tickets to the Cup!

Congrats to:

Luis Santana
Augusto Vitor de Castro
Moreira
Jason Moreno
Pauly Smallz
Mark Whitterfield
Kimberly Shadow



Miss January 2015

NAME: Sarai SCREEN NAME: SaraiKnowledge CITY: Los Angeles, CA OCC: Singer, Kush Kakery Ambassador AGE: 27

To enter or view contestants, go to *misshightimes.com*. You must be 18 or older to enter.

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10 Editor's Letter

More Science!



s a general rule, I never write the Editor's Letter without getting substantially stoned first. On this particular occasion, I decided to do a dab. I'm not quite sure how I feel about dabs yet ... even though I've been doing them nearly every day for the past three years. Still, the big question with dabs—as is also true with flowers—is whether to dab a *sativa* or an *indica*.

This question is more significant when we're talking about concentrates versus buds. Obviously, everything is way more amplified when it comes to concentrates—the potency, the flavor, and the effects of the high or stone. But what's in a "high"? And why is a "stone" any different?

Experienced stoners—or "cannasseurs," as we like to call ourselves—know that when it comes to smoking marijuana, a "high" is most often associated with *sativas*, while a good "stone" comes on with the *indicas*. But as I sit here and take one more dab, I have to wonder just why exactly that is. Don't you?

When I first started smoking weed, finding the answer to this question was mainly guesswork and mostly for fun. We spun out weird notions in our dorm rooms, such as that *indicas* and *sativas* had different types of THC that affected you differently. LOL ... *different types of THC*. Sound creative thinking, for sure, but ultimately unfounded and incorrect. Years later, when the medical movement began, we found out about things like CBD and CBN, lesser-known cannabinoids that—we assumed—acted with THC in different ways to produce those varying effects. And while there was some substance behind this thinking, we later found out that this wasn't quite true either—at least as far as the effects of *indicas* and *sativas* go. But we were getting closer.

Last month, I embarked upon yet another quest for enlightenment on this subject, but I did *not* do a dab first. Instead, science and technology were the guiding principals and truth and real understanding were the goals. What did I find, you ask? Well, all you have to do is flip to page 73 to find out the answer(s). And what you read just might surprise you.

However, I do recommend that you read "The Truth About *Indicas* & *Sativas*" twice. The first time, take it all in straight. And the second time? Have your dabs set out—one *sativa* and one *indica*—and feel the effects of more science.

Until next time, amigos!

Nico Escondido
Cultivation Editor at Large

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Better Late Than Never

It was back in 1967 that I co-authored an article in a student newspaper—in Oklahoma, of all places!!—advocating the decriminalization of marijuana. At the time, my co-author and I thought (albeit unrealistically) that decriminalization would occur within the next five years. We had no clue that it would be closer to 50 years before real progress was taking place. Even in 1967, it was obvious that the "information" being offered by the government was either unintentionally (I'm being generous here) or intentionally false and that pot criminalization was very, very harmful to individuals, families, communities and society in general.

I feel very fortunate to be alive, thanks to medical cannabis, to witness this worldwide movement toward a more commonsense, factual and compassion-based attitude regarding our beloved plant. So many of our brothers and sisters did not live to see this day.

I must offer my heartfelt gratitude to the student editors who had the courage to publish our article back in 1967, as well as to Thomas King Forçade, *High Times*, Jack Herer and the countless others who fought in this battle for freedom and personal liberty.

Please continue to remind our brothers and sisters that battles may be won, but the war against tyranny is never over. Vigilance and resistance must be constant.

Jerry Stinson

Bittersweet Memories

Wow, I found an old copy of *High Times* from June 1994. Way cool! It was like finding an old *Playboy* of Dad's—the centerfold was about as good, but the pain was just the same ... could not touch, smell or taste anything! Nothing but a picture.

Terry

In Search of Lost Ludes

I was an avid *High Times* reader back in the '70s and early to mid-'80s. I was working at the University of Southern California at the time, and I distinctly remember reading about Quaaludes ("Lemmon 714s") all the time.

Although I never tried ludes, I do have a question: Whatever happened to them? They were very popular when I was 19 or 20, listening to T. Rex during the "glam" or "glitter" period. Qualuude was definitely one of the most popular drugs of that time—so how could it completely disappear from the planet? Is it



I feel very fortunate to be alive, thanks to medical cannabis, to witness this worldwide movement toward a more commonsense, factual and compassion-based attitude regarding our beloved plant.

impossible to get the ingredients for it these days or what?

My friends and I consider this a great mystery—every other drug from those days still exists, but ludes seem to have fallen off the face of the earth. This piques my curiosity. Could you please explain to me what happened to such a popular drug, and how it could disappear without a trace?

Wendy

Quaalude is a brand name for methaqualone, also known as "disco biscuits." It had its heyday in the 1960s and '70s, but manufacture of the substance was discontinued in the United States in the 1980s, mainly due to its widespread recreational use and psychological addictiveness. But methaqualone is still available in Canada by prescription, and abuse of the drug is still common in South Africa.

Leave No Trace

I am in desperate need of some information. I have searched the Internet without any luck, so this is what brought me here. I work in an industry where smoking weed is really discouraged, and the camp that I have to stay in for the duration of my job says that we're subject to Send your letters to Feedback c/o High Times, 250 West 57th St., Suite 920, New York, NY 10107 Email: hteditor@ hightimes.com

High Times January 2015

random searches with drug-sniffing dogs. I haven't had any weed on me since

I've been here—however, I'm worried that the dog might pick up on some trace amounts. So my question is: How do I get rid of any cannabis residue or trace elements from my clothes, suitcase, etc.? If anyone would know the answer or could send me in the right direction for information, it would be you guys.

KC

If a drug-sniffing dog alerts to your bag, you should be okay as long as you don't have any actual weed on you. But if you're really worried about trace amounts, then launder your clothes thoroughly and buy a new suitcase.

Demand Change!

I live in Massachusetts and have Crohn's disease, and I use medical marijuana for it. Could we possibly set a date for every medical marijuana supporter to get together and *demand* change from our government? I am sick of spending so much of my

own money on holistic health supplements and activities to keep me out of the hospital. Before I started holistic treatments, I had three surgeries in one year. Not only does the money for these treatments come out of my pocket, but I'm saving this country hundreds of thousand of dollars in healthcare expenses-if not millions-and I don't even qualify for MassHealth! Instead, I have to pay 20 percent of my medical costs, even though I was told by my doctors that I have one of the worst cases they've ever seen, as I do not respond to any of the usual meds for Crohn's (including Remicade, a twohour chemo-like infusion). The only reason I am off the Crohn's meds, in short, is holistic treatments and medical marijuana.

So please set a date for medical marijuana patients throughout the nation to sign a petition or engage in some other kind of organized action so we can finally be heard! Thank you so much—I hope we can get this message across and have people stand up to our horrible government, which does nothing for its people (unless it's too late).

Michael

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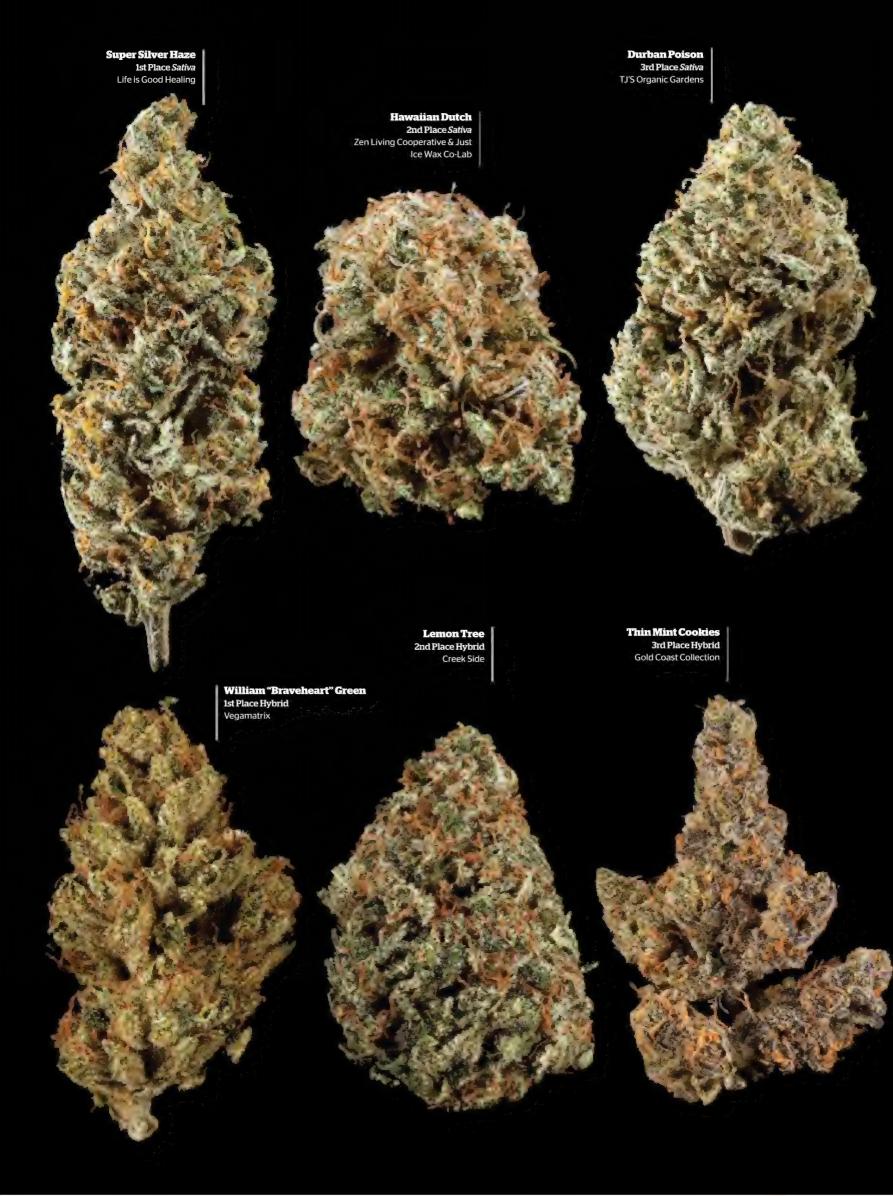
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... Come on ... Really?

Look, you're smarter than that. We all know the imitation colar you buy from discount stores are "reverse-engineered" to copy Coca-Cola" too. But is it exactly the same? Absolutely not!

Everyone knows, at the end of the day, there is only one "real thing".

Bottom line is... can you or do you really want to risk your valuable cannabis crops and your hard-earned money on unproven claims sold on the basis of "cheap"?

Sincerely,

(Mikal) &

Michael "BigMike" Straumietis



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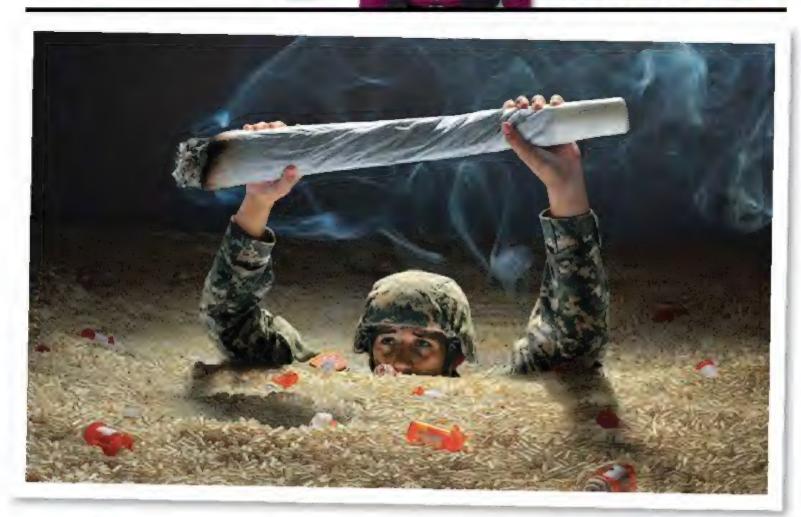
Raising the Bud Weights.. and Reputations... of Top Growers

Entertainment
JOEY
Bada\$\$
The be\$t in Brooklyn
Bed-Stuy. p.34



Food
Tropical
Rum Cake
Concoct a buzz from the
Bahamas. p.38





Battling for Pot on the Home Front

Thanks to the "Cannabis Special Forces," new commitment and energy are turning the tide for military veterans. *By Michael Krawitz*

Those who support cannabis are legion, and their numbers are growing daily. They come from every demographic and every background. But the activism of military veterans in the pursuit of legalized cannabis lends a special credence to the battle. If those who have sacrificed their health—both physical and mental—in the defense of their country can cite the benefits of cannabis in relieving their pain, who would dare argue with them?

US military veterans have always had a special relationship with cannabis. World War I vets were actually able to access it at their local pharmacies. The veterans of

World War II, however, could not—and suffered the consequences. Vietnam veterans had enormous access to cannabis while serving; many continued their use after being discharged. Denis Peron, one of the main architects of Proposition 215, California's historic 1996 medical marijuana law, is a Vietnam veteran. Today, even Korean War vets are beginning to embrace cannabis for its efficacy in treating post-traumatic stress disorder.

Martin Chilcutt, a former Navy intelligence officer, has suffered from chronic PTSD, including bouts of anxiety, depression and anger, nightmares, and

debilitating migraine headaches. Cannabis helps alleviate them all, he says—as well as his arthritis. Chilcutt worked hard to get Colorado's medical marijuana law passed in 2000, and he went on to found Veterans for Medical Marijuana Access in 2007. But the group's efforts quickly stalled, because getting veterans' service organizations to sign on to resolutions supporting access to medical marijuana couldn't be accomplished while those same service organizations refused to address the prohibition of cannabis at the federal level.

For many years, I worked inside the

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system as a volunteer patient advocate and a medicinal-access activist. I joined with Chilcutt, and our combined efforts engaged the Department of Veterans Affairs. Our partnership yielded the first-ever VA-wide medical marijuana policy in 2010, which was issued as a "pain-management directive; it was updated in 2011. It allows cannabis to be used by veterans without fear of reprisal if they live in states with medical cannabis access programs.

However, the policy also states that VA doctors are strictly prohibited from helping their patients participate in those state programs. It also reminds veterans that marijuana remains illegal at the federal level and that federal police are on duty at VA facilities.

Since 2010, veterans have formed something of a "Cannabis Special Forces," working together nationwide to produce some outstanding results. The most pressing issue has been the addition of PTSD as a qualifying condition for medical cannabis use. Seven states have approved the inclusion of PTSD; several others are considering it; and a few are fighting about it. Amazingly, Colorado and Washington—both states that have now legalized recreational cannabis use by adults—have declined to include

The VA is being investigated for the over-prescription of drugs ironic because, on average, medical cannabis reduces patients' use of these hard drugs.

PTSD as a qualifying condition. (It's a bit strange—and somewhat counterintuitive—that we still have to keep fighting for medical access even after we legalize recreational use!)

At long last, however, Congress has begun to address the issue. Representative Sam Farr (D-CA) created an amendment in 2013 to stop the VA from punishing doctors who recommend cannabis. Representative Earl Blumenauer (D-OR) took up the amendment and reworded it, and the revamped measure nearly passed in 2014 by a record vote. As you read this article, veterans will again be asking Congress to pass this amendment into law.

The VA has had its fair share of scandal lately, with poor patient care in some states leading to horrifying consequences. Prescription pharmaceutical drugs have often been at the center of these problems. Ironically, the VA is being investigated for the over-prescription of such

drugs—ironic because, on average, medical cannabis reduces patients' use of these hard drugs.

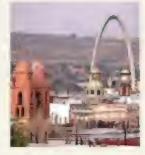
A new medical marijuana policy is now working its way through the VA system. As of May 2014, at our request, the old VA "pain contracts" have been replaced with an "informed consent" system. The policy still calls for drug testing, which is a waste of taxpayer dollars, exposes veterans to the fallout from false "positives," and eliminates trust from the doctor-patient relationship. But despite these drawbacks, it's another step forward in VA policy—one that explicitly exempts veterans with a doctor's recommendation for their medical marijuana use. In other words: definite progress. **

Michael Krawitz is a disabled United States Air Force veteran and executive director of Veterans for Medical Cannabis Access.

HIGH FIVE

Supersized Seizures of 2014

The black market is alive and well—and there's a lot of weed going to waste! By Mark Miller



Tijuana, Mexico

The border city of Tijuana has long been a key transit point for people smuggling weed into San Diego, resulting in massive seizures. On May 1, Mexican police and military confiscated 44 tons in Tijuana's Granias Familiares del Matamoros neighborhood. The load, intended for the US, was packaged in approximately 4,000 bundles weighing about 25 pounds each. No arrests were made.



Preble County, Ohio

In June, a U-Haul stopped by the Highway Patrol resulted in the secondlargest pot bust in Buckeye State history, Neither of the men inside the vehicle. Mario Mendoza of Texas and Hector Olea-Castro of Tijuana, had a valid driver's license, but they did have 84 bales of weed intended for sale in Ohio. weighing in at 2,330 pounds and worth \$11.6 million. A drug dog sniffed out the evidence.



Grundy County, Tennessee

In July, a sheriff's deputy out hunting rabbits stumbled across a massive outdoor grow. It turned out to be 37,000 plants total, watered by a reservoir system and valued at \$37 million, resulting in one of the largest pot seizures in state history. The local authorities decided to celebrate their good fortune by burning them in front of the county sheriff's department.



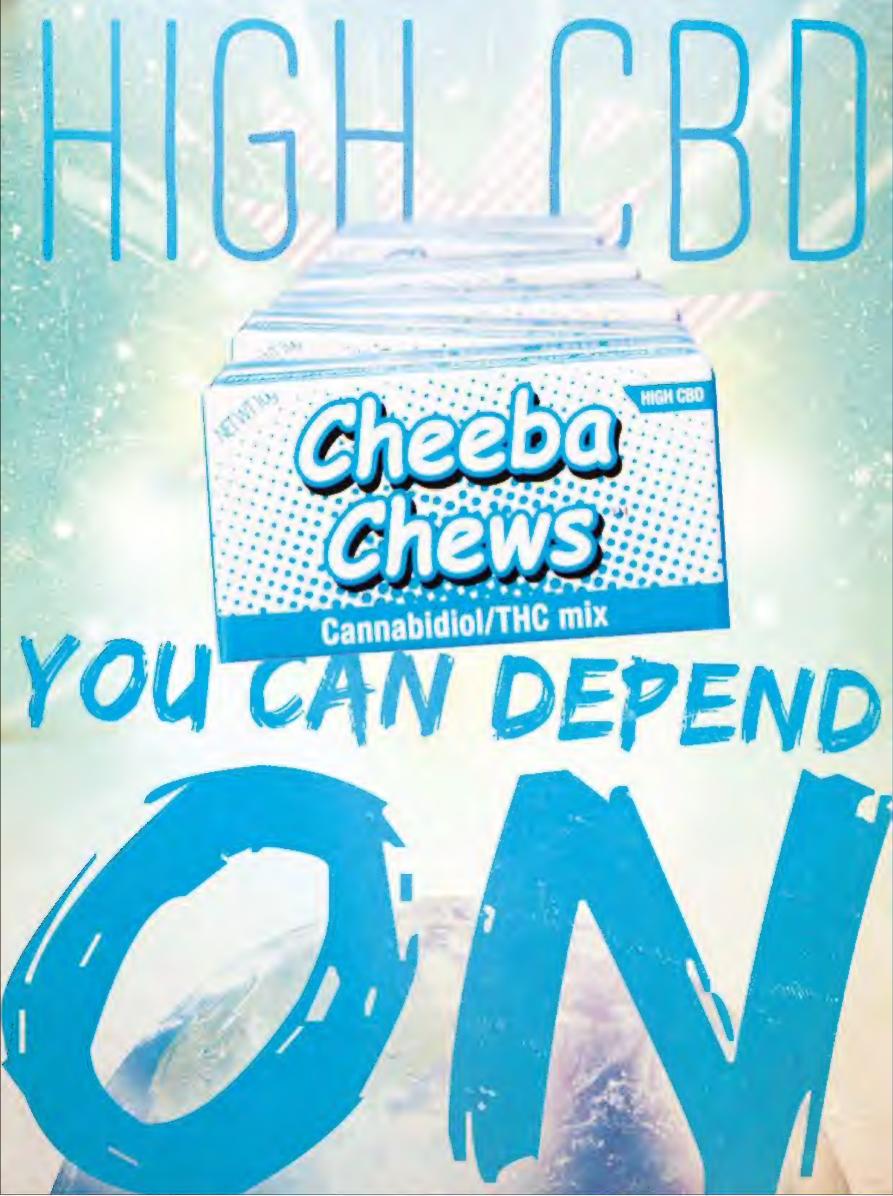
Polk County, Texas

In July, in the tiny town of Goodrich, a deer hunter came upon a secret garden, a bit bigger than your average guerrilla grow. Authorities seized 100,000 plants that had somehow escaped notice until then. Estimated value topped \$175 million. One arrest was made, but cops said that the size of the grow op and its sophistication indicate that other people were likely involved, Duh.



Seattle, Washington

This item has a surprise twist, thanks to the state's legalization law. In June. Seattle police confiscated 2.663 plants—over 50 times the legal limit-along with 86 pounds of dried weed from two residences and a warehouse, the largest seizure in the city's history. But detectives busted no one, permitting growers to select the 45 plants and 72 ounces of pot they were allowed to retain by law, courtesy of Initiative 502.





Dancing With the Pot Stars

Tommy Chong never stops advocating for pot! Even when he made his debut on *Dancing With the Stars*, the 76-year-old made sure that his entrance was pot-themed; Cheech escorted him to the stage in a low-rider à la *Up in Smoke!*

Following his performance with partner Peta Murgatroyd, the judges unanimously praised his hoofing skills. Host Tom Bergeron commented that Tommy reminded him of the "most interesting man in the world" from the Dos Equis beer commercials. Tommy quickly corrected him: "The most interesting stoner in the world."

As we go to press, Tommy and Peta are strong contenders, but it's up to Stoner Nation to make them champs. Watch *DTWS* and vote them for the win!



Pothead John's

In a September interview with Sports Illustrated, superstar quarterback Peyton Manning of the Denver Broncos implied that legal weed has increased sales at the 21 Papa John's franchises he purchased in Colorado.

Manning didn't overtly mention cannabis, but he slyly noted: "Pizza business is pretty good out here, believe it or not, due to some recent law changes." In fact, some of Manning's pizza joints had sales spikes of \$2,000 daily—that's 60 pizzas sold every hour!

Overall, Denver pizza sales are reportedly up 10 to 20 percent now that getting the munchies is legal.

Dr. Drew's Lies

Dr. Drew Pinsky is host of the talk show *Dr. Drew On Call* on the HLN network. Too bad we can't sue him for malpractice.

Disregarding all established data about medical marijuana, "addictions specialist" Pinsky recently declared that cannabis "acts like an opiate and causes severe addiction." He also alleged that pot "affects the white matter of the brain, and for kids who start using marijuana when they are 12, or even younger, those bad consequences tend not to reverse."

To state that pot use is equal to opiate addiction is an outright lie. Scores of medical and psychological studies have concluded that pot is non-addictive.

This is just the latest instance of Pinsky's antiweed bias. In 2013, he even labeled medical marijuana a "sham." Maybe the fact that Pinsky is compensated by



anti-pot interests motivates his views.

It wouldn't be the first time. In 2012, he served as a paid shill for GlaxoSmithKline, receiving \$275,000 to make positive statements about the antidepressant Wellbutrin on his show. The side effects of Wellbutrin SR include a very real risk of seizures.

But the good Dr. Drew had no problem endorsing such a drug. Maybe if the pot industry paid Pinsky enough money, he'd shill for us, too.

China's Drug War

Did you know that China has a holiday celebrating the War on Drugs? Ironically, it's the United Nations International Day Against Drug Abuse and Illicit Trafficking, which China observes by stepping up the arrest, prosecution and even execution of people suspected or convicted of drug crimes. The policy reflects the revved-up Drug War announced by People's Republic President Xi Jinping. Prior to the big day in June, Xi released a statement promising "forceful measures" against users of illegal drugs.

It wasn't just empty rhetoric. In June, the Supreme People's Court announced that drug-related convictions were up 27.8 percent compared with the first five months of 2013. In Beijing, drug arrests were up 35 percent between April and August of this year compared to last. Nearly 40,000 people in China were sentenced for drug offenses in the first five months of 2014—and almost a quarter of those were given more than five years' imprisonment or even a death sentence.

The new policy targets a rise in experimentation by young people. Those under age 35 made up 75 percent of China's new drug users in 2013.

The arrest of foreigners on drugrelated charges was also up—over 15 percent for the first half of 2014, with the majority of those arrested being African. Concern over an undisclosed number of Australians facing possible death sentences for possession of "significant quantities" of drugs has prompted that country's Department of Foreign Affairs to issue an official warning to residents traveling to the People's Republic.

How real is the threat? In August, China executed two South Koreans for drug smuggling, while in the past five years, at least four people from Japan and one British man—the latter suffering from severe mental illness, his family insists, and possibly set up by Polish drug traffickers—have been put to death on smuggling charges.

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HIGHWIRE

Dispatches from the international drug war. By Bill Weinberg



Saudis Crack Down on Yemeni Hash Pipeline

Border patrols along Saudi Arabia's rugged mountain frontier with Yemen report increasingly frequent interceptions of hashish, weapons and other contraband. Over a nine-month period ending in August, interceptions at the Najran border post alone netted four tons of hashish, as well as explosives, hand grenades, firearms and ammunition. Some 250 smugglers and 25,000 "infiltrators" were also detained at the post, and several vehicles impounded.

Border control is a growing concern in the Saudi kingdom, with wars raging both in Yemen to the south and Iraq to the north. Saudi authorities continue to investigate a mortar attack on the Jadida Arar post along the Iraqi border that occurred in early July. Late in the month, guards on the Jordanian border claimed to have confiscated almost a quarter of a million Captagon pills, as well as quantities of amphetamine.

With all eyes on the ISIS takeover of northern Iraq, civil war has been escalating in Yemen, and every faction in the multisided conflict is turning to the hashish trade—although this involves a greater degree of hypocrisy for the jihadist forces,



ISIS Burns Cannabis Fields in Syria

The extremist group ISIS—now calling itself simply the "Islamic State"—has left a bloody trail of mass murder in its advance across large swaths of northern Syria and Iraq, slaughtering and enslaving Shiites, Christians and others deemed to be heretics. So it's hardly surprising that ISIS has also taken a tough line on cannabis: The group posted Internet footage in late August showing its militants burning cannabis fields in the Syrian governorate of Aleppo. The Syria Deeply blog, which supports the opposition to both ISIS and Syrian dictator Bashar al-Assad, notes that a cannabis economy has taken hold in the country's rebel-held north over the past three years. The crop has become a key source of financing for a proliferation of armed groups now that nearly all other economic activity has been disrupted by the war.

The blog reports from the Jabal al-Zawiya, a mountain range along the Turkish border. Once famous for its olives, the region is now growing cannabis almost exclusively. "We don't have jobs anymore," said a cannabis farmer named Ahmad. "We have no land, no trade, nothing. If it wasn't for smuggling, we'd starve to death." And now that ISIS is attempting to destroy their last economic lifeline, they just might

which share the Saudi state's ultra-puritanical stance on cannabis.

Still More Narcofosas Uncovered in Mexico

Mexican authorities unearthed five recently buried bodies from a clandestine grave in the rural pueblo of Mochicahui in Sinaloa state, officials announced on July 21the latest in a long string of gruesome finds that the Mexican press has dubbed narcofosas, or "narco mass graves." Sinaloa state prosecutors were tipped off to the gravesite by a local resident whose family member was among the disappeared. Peasants in the region are being terrorized by the Sinaloa Cartel, which makes a grisly example of those unwilling to cooperate in



its drug-running operations.

In late June, a much bigger narcofosa was discovered in the municipality of Cosamaloapan in Veracruz state, with 31 cadavers unearthed. The corpses were displayed by authorities in a stadium in the state capital, Xalapa, where people whose loved ones had recently disappeared could attempt to identify the remains. The mass grave was said to be about six months old.

Veracruz is the scene of a bloody turf war between the Gulf Cartel and its rogue paramilitary offshoot, Los Zetas.

The narco gangs prey on migrants passing through their turf, with a series of massacres carried out in Tamaulipas state, the Zetas' heartland, just across the Rio Grande from Texas. The migrants presumably refused to serve as "mules" for the Zetas, and the massacres that have come to light thus far may represent only the tip of the proverbial iceberg.

Cartel Kingpin Prevails in Prison Hunger Strike

Media reports in Mexico indicate that the notorious Sinaloa Cartel kingpin Joaquin Guzmán Loera, a.k.a. "El Chapo"—who



evaded authorities for over a decade before being captured earlier this year-claimed victory in a hunger strike at the top-security Altiplano prison at Almoloya de Juárez in México state. El Chapo reportedly started the strike on July 16 with his fellow imprisoned kingpin, Édgar Valdez Villarreal, a.k.a. "La Barbie," who had once been his comrade-in-arms but later became a bitter enemy after La Barbie defected to the rival Beltran-Leyva Cartel. The hunger strike spread rapidly throughout the prison, with at least 1,000 other inmates joining in. The prison authorities quickly capitulated on some of the key demands. For example, prisoners will now be given new shoes and clothing, and they will be served more food (although of the same mediocre quality). Inmates will also be allowed to purchase more items, such as toilet paper, from the prison store. And they'll be allowed three attempts to make phone calls to their families; previously, if a call wasn't connected or the line was busy, they had to wait nine days to try again. 💥

For updates on these and other stories, see Bill Weinberg's websites, GlobalGanjaReport.com and WorldWar4Report.com.









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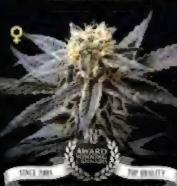
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Many people find their love match on the Internet these days; according to a 2013 Pew Research Center study, 11 percent of American adults—and 38 percent of those who are currently "single and looking" for a partner—have used online dating sites. Now sites are cropping up to connect marijuana lovers looking for likeminded folks.

Several sites claim to cater to single stoners, varying from dead links to beta-version pages in need of a developer, a designer and funding. Enter My420Mate.com, which has a nice-looking user interface as well as a smartphone app. My 420 Mate members join for free; then they can add photos, chat live and search for potential matches in their area. The site, whose motto is "Plant your seed and watch your love grow," hopes to transcend the stoner stereotypes and cater to cannabis lovers from all walks of life. Co-founder Miguel Lozano enthused to HT, "We have members all over the world-Spain, Uruguay, the UK, Canada and across the US." The site currently boasts several thousand users, and Lozano anticipates big things ahead. When asked for a My 420 Mate success story, Lozano laughed and said, "We definitely have people dating and seeing where their relationship goes." Spoken like a true mota matchmaker.

Living Her Truth

Jaws hung open with her epic mic drop. Alaska reporter Charlo Greene set the news world, blogosphere and Twitterverse on fire with her headline-making signoff on Anchorage's KTVA news: "Fuck it—I quit." Greene, frustrated by the politics surrounding Alaska's ballot measurement this November to legalize marijuana, decided that her role as the head of the

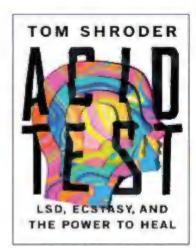


Alaska Cannabis Club was more important to her than her work as a journalist. She wanted to draw attention to the legalization cause, and she succeeded. When we congratulated her on generating so much buzz, Greene laughed and said, "I'm just living my truth." Go to *hightimes.com* for our exclusive interview with the fiery marijuana activist and enthusiast.

The Power to Heal

In the 70-plus years since Albert Hofmann discovered LSD, psychedelic drugs have had their ups and downs, from valued therapeutic aids to mind-blowing party drugs and back again. But recreational use had its repercussions, with bad trips equaling horrific press, eventually landing many psychedelics in the dreaded Schedule I category of the Controlled Substances Act (i.e., a high potential for abuse and no redeeming medical value). Award-winning reporter Tom Shroder navigates these peaks and valleys expertly in his new book, Acid Test: LSD, Ecstasy and the Power to Heal, and exposes the nascent path to a psychedelic healing resurgence.

Despite its popularity as an allnight party drug, the psychedelic MDMA, or ecstasy, has been used as a therapeutic tool for decades. Most of the therapy work has been done underground, but through



great efforts and persistence, MDMA's now-FDA-approved studies are showing seriously promising clinical results when used for treatment-resistant post-traumatic stress disorder (PTSD).

In this ambitious work, Shroder creates a narrative that follows the lives of three men whose paths eventually intersect via MDMA. The portraits are in-depth and unflinching as the players explore their deepest psyches in the search for healing. Nicholas Blackston is

a Marine combat veteran whose post-Iraq PTSD was debilitating. The stories of Blackston at war are gripping, but the tales of his healing are even more riveting. Blackston lays himself bare for these pages, as do the two other protagonists-Rick Doblin, the founder and executive director of the Multidisciplinary Association for Psychedelic Studies (MAPS), and Dr. Michael Mithoefer, who conducts clinical trials with MDMA to treat PTSD. All three men are pioneers with fascinating lives.

This book is of great importance to our future understanding of psychedelics, and also of the delicate inner workings that so intricately make up our experience of reality. Simply reading about these great leaps in research is therapeutic. And with over 20 million Americans suffering from PTSD, the message is both timely and urgent. *Mary Ought Six*

sPOTLIGHT

Apothecanna Pain Spray

Cooling mint, fragrant cloves and healing arnica are blended with soothing cannabis oil to create all-natural pain relief in this fast-acting body spray. Apothecanna founder James Kennedy took his inspiration from traditional plant medicine and combined it with expertise gleaned from a decade in the natural-products industry. The company's latest release is a deeply penetrating and effective topical that treats swelling, bruising, aching joints, arthritis, muscle aches, nerve pain and more with one or two aromatic mists.

Colorado requires child-resistant packaging on all cannabis products, so Apothecanna Pai Spray features a regulation-compliant locking device that keeps it leak-safe, making it great for travel and mountain sports. Plus its refreshing herbal scent adds a healing homeopathic zing!

Available in Colorado; hemp-based products available for retail nationally at apothecanna.com



High Times January 2015



Albini's Got the Rock ... and the Roll

The man has mastered it all. By Mark Miller

The laser-beam focus of Steve Albini is evident both in his role as the guitarist/vocalist of the minimalist yet pulverizing rock trio Shellac (and, before that, the innovative Big Black) and his work as an engineer or producer on over 2,000 albums. (It should also be mentioned that he's an avid and successful poker player.) We visited Albini over the summer at his famed analog studio Electrical Audio on Chicago's North Side, where he showed off his masterful joint-rolling skills before sitting down to field our questions.

How does Shellac's new LP, Dude Incredible, compare to your previous releases?

This record is no different than our other five albums. When we started [back in 1992], our band established a core set of ideas we wanted to explore until we got tired of them. And we haven't gotten tired yet, which means our records are not going to be radically different from

one album to the next. [Dude Incredible] is us still running the experiment that is Shellac, which is a means to express the creative impulse.

What's the difference between being in Shellac and working with other bands in the studio?

When I'm an engineer on somebody else's session, I don't get too excited if I like [the music] or not. I'm not thinking, "Ska punk? It's 2014 ... why are we doing this?" I try not to form an opinion about it at all; if you get lost in the music, then you're not paying any attention to the technical side. But when I'm working on music for Shellac, I literally don't think about the technical considerations at all-I want to experience it as a participant.

You've said Shellac would always be a part-time endeavor. Does that inhibit connecting with your audience?

Last night I was playing poker with a table full of

Phish fans, and they were all talking about which Phish concerts were the greatest. While I see that experience as letting a group of people piss on you, I think that's a very generous attitude for an audience—Phish should feel very gratified their audience is willing to give them that much leeway. Shellac is never going to have that relationship with our fans ... I'll go so far as to say I envy Phish.

Talk about producing Nirvana's final studio album, 1993's *In Utero*.

Initially, Nirvana was ecstatic, so I felt really good about the session. Over time, [music-industry] people around them created doubt about the record, and the band experimented with alternate mixes and chose

"I think weed is largely harmless. From a cultural standpoint, I'd much rather be in a room full of people who are stoned than people who are drunk."

some to use. And I'm fine with that: The record in the stores is the record Nirvana wanted you to hear—end of conversation. On the 20th-anniversary reissue [released in 2013], I saw the mastering through to the very end. The vinyl edition of the *In Utero* reissue is as good as I can make a record from a technical standpoint.

You rolled some tight joints during our photo shoot! Do you and/or the band use pot, creatively or otherwise?

I haven't smoked weed in a long time, but it was an important part in forming me as a person. In high school, I got high three or four times a week, for sure. But when I got to college and could smoke whenever I wanted, it lost its appeal—I didn't like being high.

Our drummer Todd [Trainer] was a wake-and-bake committed smoker, but he recently went on a health kick and quit ... though I'm sure he'll still smoke weed now and again. I think weed is largely harmless. From a cultural standpoint, I'd much rather be in a room full of people who are stoned than people who are drunk. **



Factoic

Since Albini doesn't partake these days, the joints that he rolled were happily snatched up and toked by the session's photographer, Mr. King; by Electrical Audio's manager, Stephen Sowley; and, of course, by us.



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Rookie No More

Pro Era's co-founder Joey Bada\$\$ does it his way. By Sara Beck Renfro

High Times sat down recently with indie hip-hop artist Joey Bada\$\$ to talk about his much-anticipated release, B4.DA\$\$ (Before Da Money). The co-founder of the Pro Era collective has taken to Twitter to let the world know-haters and fans alike-that he is a brand all his own. "I'm really loving what I'm doing with it," Joey says. "Taking my time, doing it my way-just doing me. I'm really proud of what it is so far." And the music may soon become a family affair: "My brother and I are just trying to learn as much as we can and take over the whole production. I'd like to learn to play the piano and the bass guitar. I'm

gonna kill that shit."

Although he's been told that he has the looks and talent to cross over into acting, Joey plans to wait until the time is right. "Music is gonna be around, and I know I'm always gonna do it," he says. "With acting, there's a way bigger pool of people to compete with, so you really gotta be something special." He was drawn to poetry from an early age and had an interest in expressing himself theatrically. "I was always a music kid; then in high school I auditioned for the acting program. That's how I got in. Now that I got my name up, I'd like to audition for some things. I gotta really fit the

script—not to say I wouldn't try something different."

Joey's initial encounter with pot came when he was 15. "First time I was mad scared—that shit hit me crazy. I was like, 'What the fuck is happening right now?" But these days, his relationship with weed is a lot more chill. "It just relaxes me," Joey says. "It doesn't really affect my creativity at all—I'm creative with or without it." His favorite strains

"You start opening up your mind, and it's your own path—because everybody's different."

are Kush and Girl Scout Cookies, and his fans pass blunts to the stage on the regular. But, he adds, "I'm not with the edibles—I just prefer smoking. It's the most controllable. You never know what's enough."

And he's the first to admit that performing while high can be tricky. "There were definitely times I was too high. I'd miss a lyric or something and be like, 'All right, I've got to get my shit together, 'cause I'm way too high right now." He enjoys playing in legal states, but he finds that his fans, wherever he goes, are there to party. "Legalization would be cool and whatever, but I'm just gonna smoke anyway," he says-especially given weed's well-known tendency to expand consciousness. "You start opening up your mind, and it's your own path-because everybody's different."

While Joey gives off the vibe of future hip-hop royalty—a young rogue prince set to climb the ladder of musical success—he also maintains a hometown Brooklyn charm. The key to life in the Big Apple, he says, is having the proper transportation. "I have a fixed-gear bike that I slapped up with stickers. I ride every day in the summer. You gotta ride your bike!" **



Caught in the Act

Joey was out riding his bike like a wild man when he was recognized by a girl who, it turned out, worked for a magazine that he'd been featured in. "She said, 'I know who you are. You should really be more careful."

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36 Entertainment High Times January 2015



Potpourri A compendium of kind.

This little book packs a powerful punchbowl of magical marijuana Kool-Aid. Top-five lists, weed events, reefer-madness trivia, personal anecdotes, recipes, etymologies and more make up this aptly named *Miscellany*. The authors take us 5,000 years back in time to explore weed's first documented medicinal uses, then bring us up to the present day with all its ongoing re-legalization efforts, worldwide marijuana-law reform and, of course, pot's enormous pop-cultural recognition.

Did you know that a recent study in Philly investigated the science behind getting the munchies? Do you know how the word "toke"



Pilchers
Marijuana
Miscellany
Tim Pilcher and
E.M. Frost
(Ilex)

came into existence? How about the best coffeeshops to visit in Amsterdam? Do you know your cannabis-related jazz history, or the best documentaries and albums to get high to? This slim volume acts as a guide to an astonishing array of all things marijuana. It's jammed full of sugary facts, as well as a few darker images; every cannabis user will discover something new here, and find even more to peruse at length.

Pilcher has a number of cannabooks beneath his belt already—*The Cannabis Cookbook*, *Spliffs 2* and *Spliffs 3*—so his latest offering slides right into place. He's also written books on sex, sci-fi, comics and the history of ecstasy, and he's currently the chair of the Comic Book Alliance.

High Times and the Cannabis Cup make several appearances in *Pilcher's Marijuana Miscellany*, alongside diagrams on how to roll a joint, mini-bios of the "Heroes of Hemp," and the inside stories behind the most famous underground cannabis comix. Pilcher's own tales of his early days navigating the world of herb are light and entertaining, and his humorous style makes this book the perfect cannabis companion. Mary Ought Six

MUSIC RECOMMENDATIONS



Steven Bernstein and the Hot 9

Viper's Drag (Impulse!)

New Orleans pianist and singer Henry Butler and New York trumpeter/arranger/bandleader Steven Bernstein reactivate the Impulse! label with a bouncing 10-man journey through the origins of jazz from a decidedly contemporary perspective. Tunes by Fats Waller and Jelly Roll Morton

bump and grind alongside Butler's tasty originals in a set that slithers from ragtime to swing, through R&B and back to Dixie, with all the grace of its namesake serpent. Dancing shoes are obligatory as Big Easy sounds meet Big Apple sensibilities with a resounding, joyous crash! Rich Luhrs



Ty Segall *Manipulator*(Drag City)

After his band Fuzz spawned one of 2013's best albums, Ty Segall has unearthed a solo neo-psych goldmine of 17 compact yet far-reaching tracks, including the THC-drenched "The Connection Man." Segall's versatile vocals evoke everyone from Syd Barrett to Sabbath-era Ozzy. "The

Clock" is well worth your time, with an irresistible acoustic riff holding aloft the dreamy melody, while the lyrical ode to departure "Stick Around" climaxes the LP aptly. Forget your ears—you owe it to your aesthetic sensibilities in general to let *Manipulator* use you for all you're worth. Mark Miller



Mohawk (Iron Man Records)

The words here poured forth after cannablissed talking poet John Sinclair stared at the moon upon hearing that Thelonious Monk had died. The luminous lunar orb peered back, inspiring Sinclair to pen a series of poems about Monk and his musical comrades Charlie Parker and Dizzy

Gillespie: "Lest we forget, these are young men ... bursting with the joy of discovery." Sinclair lifts up the proverbial bandstand with tales of the birth of bebop. Steve Fly creates a hip-hopped, bebopped bed of rhythmic sound—and the bonus track at the end has a Beatle on it! Michael Simmons

BOOK RECOMMENDATIONS



Caught
Lisa Moore
(Grove Press)

Caught is a fast-paced, breathless narrative that starts with a bang: 25-year-old David Slaney breaks out of a Nova Scotia prison and goes on the run. His journey takes him across Canada on a quest to win back his true love and reunite with his old pot-smuggling crony, just steps ahead of a detective

desperate to make the arrest of his career. Heartbreak and adrenaline pulse through this beautifully crafted, intimate portrait of an ambitious young man trying to secure his fortune, get the girl, and outrun the law in the 1970s heyday of smuggling pot in the North Atlantic. Mary Jane Gibson

DVD RECOMMENDATIONS



That's The Way It Is (8 CD/2 DVD Deluxe Edition) (RCA/Sony)

Originally released in 1971 as both a film and accompanying album, *That's the Way It Is* captures the King at the height of his preflab Vegas years, engaged and energetic. Unfortunately, this box set is a Big Hunk of Nothing New. Any true Elvis freak already has 90 percent of this material.

Adding insult to injury is the fact that there are something like nine hours of unreleased footage from these concerts and rehearsals available on bootleg, yet no one thought to include any of it here. This set is a shakedown. Colonel Tom Parker would have been proud. Chris Simunek





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Tropical Rum Cake

It's dessert season in the Carribean.

The original version of this rum-soaked cake, which is hugely popular in the Caribbean, especially the Bahamas, is made by the Tortuga Rum Company. We're going to get as close to the original as we can for the perfect New Year's party cake. This isn't your typical holiday rum cake—for

one thing, there's a generous helping of marijuana present, and for another, there's no fruit ... but it is *super*-doused in rum. This cake will give you a layered buzz, so be careful if you're going out!

The Bahamas have a rich history of pot smuggling, and this cake is the perfect way to smuggle some green into your next party. The texture is devilishly moist and smooth, the flavor addictive, and the cake itself a wonder to behold. So it's best to err on the side of caution when going back for seconds. The rummy sensation and lingering green flavors will leave you warm and craving more, but stick to the standard rule for edibles and wait an hour before popping that second slice into your mouth. Mary Ought Six

TROPICAL RUM CAKE

Cake

1/2 cup cannabutter 2 cups cake flour 1½ cups sugar 3½ oz package instant vanilla pudding mix 1/2 cup finely chopped walnuts (set aside for coating Bundt pan) 3 tsp. baking powder 1 tsp. salt 1/2 cup vegetable oil 4 large eggs 1/2 cup milk ½ cup golden rum (Tortuga or Whaler's Vanille, if possible) 2 tsp. pure vanilla extract 1/4 tsp. butter rum extract

Rum syrup

½ cup cannabutter ½ cup golden rum (Tortuga or Whaler Vanille, if possible) ¼ cup water 1 cup sugar

Start by preparing cannabutter for both sets of ingredients. Put one cup of unsalted butter into a double boiler over low heat. Add a quarter-ounce of well-ground cannabis. Stir until the cannabis is evenly coated, then stir the mixture occasionally for 40 minutes (and be sure the weed doesn't get toasty). Strain well through a cheesecloth. Divide the butter in half, then get to work on the cake.

Combine the cake flour,

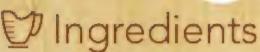
sugar, baking powder, salt, cannabutter (one-half!) and vegetable oil. Mix on low until evenly chunky. Preheat the oven to 325°F. Lightly grease a large Bundt pan and sprinkle the walnuts inside; this makes an attractive topping.

Take what you've already mixed for the cake and add the instant pudding, milk, eggs, rum, rum extract, vanilla extract and vegetable oil. Beat on medium until the batter is smooooth. Pour into the Bundt pan and bake for 55 minutes to an hour, until top is golden and a toothpick comes out clean. Then let it cool in the pan.

For the glaze, combine the remaining cannabutter with water and sugar. Bring to a boil, then reduce to a simmer. Simmer until the glaze is slightly thickened and smooth. Take off the heat and stir in the rum.

While the cake is warm, drizzle the glaze over it inside the Bundt pan. Allow it to soak in while adding more, until all the glaze is absorbed. Do not remove the cake from the pan until it's fully cooled. (Waiting till the next day ensures a seasoned flavor that's just the right amount of boozy.) *Stones 10*.





- 14-20 grams of botanicals per cup*
- * 2-5 cups/475 mL-1.18 L of unsalted butter (Do not use margarine, it will not work)
- 1 tablespoon/15 mL of sunflower lecithin**

DO NOT ADD WATER!!!



- Place the ingredients into your MB machine.*
- 2. Select the "Temperature" button and set at 160°F/71°C.
- 3. Press the "2 Hours/Butter" button.
- 4. After the cycle is complete, unplug at wall socket, remove head of appliance, put on your LoveGlove™ and pour slowly through the PurifyFilter™ into a storage container.
- * FOR BEST RESULTS DO NOT PRE GRIND BOTANICALS. Adjust botanical weights according to personal preference.
- ** Sunflower, rice or soy lecithin is optional, but recommended. Lecithin is an emulsifier, which is used in the pharmaceutical industry for binding elements and increasing potency.





MARKET ANALYSIS

Prices by the ounce

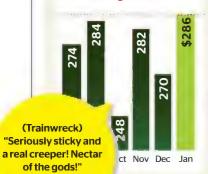
All indices rang in the New Year above their previous month's average. The US Price Index enjoyed the biggest increase, finishing the month \$19 above its December average. The Mids Index, meanwhile, reached a five-month high at \$286 an ounce and led all indices in submissions. Kush, once again, was the most submitted strain.

US Price Index YTD Average: \$303

Kind Index YTD Average: \$373



Mids Index YTD Average: \$286



-Salem, OR

Schwag Index YTD Average: \$110



TRANS HIGH MARKET QUOTATIONS

STATE	CITY	STRAIN	PRICE
Alabama	Birmingham	Blueberry	\$360
Arizona	Phoenix	Blue Dream	325
Arkansas	Little Rock	Purple Kush	350
California	Los Angeles	OG Kush	300
	San Francisco	Deadhead OG	320
Colorado	Colorado Springs Denver	Island Sweet Skunk Bruce Banner	220 300
Delaware	New Castle	Skunk #1	350
Florida	Fort Lauderdale Miami	Girl Scout Cookies Sour Diesel	425 310
Georgia	Atlanta	Girl Scout Cookies	320
Illinois	Peoria	Jack Herer	300
	Springfield	Animal Cookies	280
lowa	Cedar Rapids	Black Afghan	320
Louisiana	New Orleans	Grand Daddy Purps	400
Maine	Bangor	Snowcap	230
Maryland	Baltimore	Sour OG	400
Massachusetts	Boston	Girl Scout Cookies	350
Michigan	Flint	SFV OG Kush	250
Minnesota	Minneapolis	Headband	380
Mississippi	Pearl	Pineapple Kush	320
Missouri	St. Louis	Blue Dream	380
Montana	Bozeman	Cinderella	250
New Hampshire	Manchester	Sweet Tooth	280
New Jersey	Atlantic City	Trainwreck	300
New York	New York Riverhead	Strawberry Cough Northern Lights	380 360
Ohio	Columbus	Death Star	300
Oklahoma	Moore	Pineapple Kush	275
Oregon	Salem	Trainwreck	280
Pennsylvania	Philadelphia	Sensi Star	360
Tennessee	Knoxville	Goji OG	400
Texas	Austin	Vanilla Kush	240
Vermont	Burlington	Critical Kush	320
Washington	Oak Harbor	Shatter	30/gra
Wisconsin	Milwaukee	Sour Diesel	360
INTERNATIONAL			
Canada	Edmonton Toronto Vancouver Island	Cotton Candy Girl Scout Cookies BC Bud	C\$240 C\$250 C\$200
England			
England	Dover	Purple Kush	£300

High Times wants to know what you're smoking. Submit your strain information including location and price by the ounce to **thmq@hightimes.com**, or tweet us (**#THMQ**).

(BC Bud)
"I'm stunned by
what others pay! I
had no idea...."
-Vancouver Island



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"If the other has an possible to the radiopens on sany to have appearity the advantages of growing with Seasi Cal-Mag XIIIa:

STATE IS HOSE SPACE CAL MAD STEA COMPARES TO THE CHAPTETITION	SENSI CAL-MAG XTRA	TOP COMPETITOR	COMPETITOR #2
CALCIUM	V	- V	V
MAGNESIUM	V	V	V
CORRECT AMOUNT OF IRON	~	V	X
MICRONUTRIENTS IN THE RIGHT RATIO	V	X	X
20 AMINO ACIDS	V	X	X

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2 Trim Tech

\$349.99 mytrimmer.com Automatic trimmers get a bad rap for sometimes mangling our precious buds instead of gently manicuring them. But now you can forget about those high-priced, heavy-duty machines thanks to the Magic Trimmer, a hand-held, affordable device that puts you in control. At just 21/2 pounds, it's light and easy to maneuver, allowing you to give your buds a perfect trim quickly and efficiently.

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ganja-inspired themes to create 420-fashionable styles for
everyone.







lanuscy 2al5 High Times 45







Green Green

The U.S. Cannabis
Cup returned
to Washington
in the midst of
a statewide
cannabusiness
boom.

By Samantha Nicholas



George Washington once sagely observed: "Perseverance and spirit have done wonders in all ages."

Cannabis activists would no doubt agree. Medical marijuana is increasingly embraced—though for the vast majority of people in this country, any kind of pot use remains a crime. But those medical marijuana victories inspired canna-activists to dream bigger—and perseverance and spirit have been two of their biggest assets in this struggle.

In 2011, almost a quarter of a million signatures were gathered in support of Initiative 502, a marijuana-law reform bill that legalized adult recreational use in Washington State. That bill was submitted to the State Legislature, but no action was taken on it. It then automatically advanced to the 2012 election ballot.

Now here was an issue that got the attention of the electorate! An eye-popping 81 percent of registered voters turned out and passed I-502 by a margin

of 56 to 44 percent. Washington and Colorado—which passed its own legalization law that year—became the first two states to allow adults to freely use pot for recreational purposes.

The "wonders" that Mr. Washington spoke of have indeed transpired, with surely more to come as other states witness the benefits of legalization. Washington State raked in \$2.5 million in tax revenue in the first two months of legal retail pot sales—a figure that will only increase as more shops open.

Still, the current law is an exercise in evolution. Pot is taxed at a staggering 25 percent. What other industry is looted like this? And the State Liquor Control Board oversees pot commerce—which, as High Times came to find out firsthand, can be an impediment to mounting a Cannabis Cup.

The Comcast Arena was chosen as the site of the third High Times Cannabis Cup in Washington—a venue that could easily serve 10,000 attendees. But just two











Now a pot producer can conduct business out in the open, under the umbrella of legitimacy.

1) The Masked Dabber was a super-high heroine.

2) The Sasquatch Glass Guitar took second place for Best Glass.3) Rilla Concentrates offered maximum dabs.

4) Magical Butter rolled up to the Cup in their flashy company limo.

5) Olympia Mike's Super Lemon Haze grabbed the Cup for Best Medical *Sativa*.

weeks prior to the event, the Liquor Control Board decreed that there could be "no smoking on any premise with a liquor license." Negotiations to overturn this edict quickly went nowhere.

Again, perseverance and spirit prevailed. High Times leased two parking lots adjacent to the arena and transformed them into recreational smoking areas where cannabis vendors could show their wares. Additionally, a shielded side street smoking area for vendors was approved. (The only vendors permitted on Comcast's property were companies marketing non-cannabis merchandise.) And so the Cup got underway with "fun spots" operating on three sides of the arena, requiring a decidedly stoner-unfriendly trudge up and down the hill that Comcast's events fortress resides upon. And perhaps this is where the most lawlessness took place: "Too much jaywalking," complained one cop.





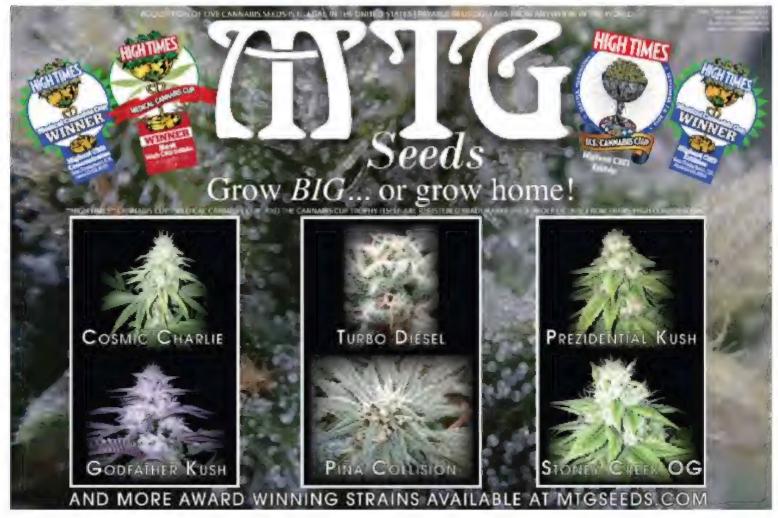






But the unexpected exercise was worth it. Washington has always grown some of the best weed in the nation—as High Times (among many others) can attest: One of the pleasures of the Seattle Hempfest has been checking out the finest pot strains in the state. But these moments, more often than not, were outlaw interactions, with growers surreptitiously showing HT staffers their prize buds. Now that legalization has arrived—and with it the opportunity to display an array of nug jars openly at the Cannabis Cup—hobnobbing with expert growers is no longer a clandestine undertaking. Now a pot producer can conduct business out in the open, under the umbrella of legitimacy.

The word is that Washington retail pot shops have been suffering a drought of product. But there was no such shortage at the Cup. Of the five Cannabis Cups held thus far in 2014, the vendors of the Evergreen State rolled out the most prodigious and prestigious variety of buds we've seen this year. Not to say that dabbing wasn't the sensation it always is, but Washington's pot population clearly seems to have a stronger affinity for fresh, fragrant buds than other states.



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When Cup-goers opted to take a break from the recreational smoking areas, they had a choice of grooving to the bands that played throughout the day on the Comcast Arena stage or checking out the seminars that were presented hourly. "Navigating I-502" proved to be one of the most informative panels, with industry experts examining the ins and outs of the new law. And as the new industry takes shape, those who seek to open a cannabis-themed company flocked to the seminar dealing with the steps necessary to get them started.

On Saturday night, the Wailers took the Cannabis Cup stage and rocked the crowd with tunes from *Legend*, the compilation album of Wailers classics. Frontman Koolant Brown led the charge, whipping up the crowd time and again, most notably when he induced the audience to take over singing "Three Little Birds." With legal weed in Washington a reality and a day of legal revelry already in the Cannabis Cup books, the lyric "Every little

thing gonna be all right" carried an extra-special meaning.

The Cannabis Cup awards were presented to a wide array of winners; no one company dominated. Actor David Arquette showed up to present the Best Non-Edible Medically Infused Product, an item he encouraged everyone to "rub all over your body." Robert Platshorn, who served the longest prison sentence for a nonviolent pot "crime" in US history-30 years-awarded the prize for Best Hybrid, while former NFL star Kevin Gogan did the same for Best Product.

Washington has already turned the all-important page to usher in a new era of cannabis sanity. Now it serves as an example to the rest of the nation. The state's cannabis industry still has needless hurdles to surmount-or better yet, to remove altogether. But perseverance and spirit remain the essential elements in winning the battle for marijuana, and you'll find no shortage of either in the state that was named for our most famous Founding Father. *



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For Us, It's Simply Black & White



Sativa

1st Place - Super Silver Haze, from Life Is Good Healing 2nd Place - Hawaiian Dutch, from the Zen Living Cooperative and Just Ice Wax Co-Lab 3rd Place - Durban Poison, from TJ'S Organic Garden

Indica

1st Place - Cookie Monster, from the Source Genetics 2nd Place - Grandma's Batch, from Heirloom Genetics 3rd Place - Kaya's Koffee, from Pacific NW Roots

Hybrid

1st Place - William "Braveheart" Green for Vegamatrix 2nd Place - Lemon Tree, from Creek Side 3rd Place - Thin Mint Cookies, from Gold Coast Collection

Non-Solvent Hash

1st Place - OG Ghost Train

Haze #153-micron 5-Star Bubble Hash, from A Greener Today with Goat Organics 2nd Place - ZkittleZ Bubble, from 3rd Generation Family with Terp Hogz & Boo-Boo's Bubble

3rd Place - Miami Haze 99% Heads/Dry Sift, from Pacific NW Roots

1st Place - Lemon Fire Nug

Run from Mr B Extracts

Concentrate

2nd Place - Master Yoda Batter, from Brutal Bee with KC Extracts 3rd Place - OG Ghost Train Haze #1 Sugar Wax, from A Greener Today

Edible

CHRONICLE BOOKS

from aKaWoNkA with Jesse Patrick 2nd Place - Sensi Sweets Three-Drink Sampler, from A Greener Today with Sensi Sweets 3rd Place - Margarita

1st Place - Trail Blazer Bars,

Truffle—Lime, Tequila and Sea Salt, from Cheffettes

Medical Sativa

1st Place - Super Lemon Haze, from Olympia Mike 2nd Place - Blue Dream, from TJ'S Organic Gardens 3rd Place - Sour Pebbles, from Firebros.

Medical Indica

1st Place - Kosher Kush, from Phenotype Farmers 2nd Place - Rainbow Kush, from A Green Cure 3rd Place - Candy Land Kush from Olympic Mike

Medical Hybrid

1st Place - Zeus OG, from A Greener Today 2nd Place - Super Lemon Haze, from A Green Cure 3rd Place - Girl Scout Cookies, from Fweedom Collective with Aurum Farms

Medical

Non-Solvent Hash

1st Place - Pineapple Express 73-micron 5-Star Bubble Hash, from A Greener Today with Goat Organics 2nd Place - White Tangerine OG-Non-Solvent, from the Bakeréé with Green Masons 3rd Place - Tangie Royale with Cheese, from Black Dabber with Phenotype Farmers

Medical Concentrate

1st Place - Blue Dream x Tangie, from Vader Extracts & Grateful Meds 2nd Place - Dutch Treat Shatter, from Rainier Alternative 3rd Place - Lemon Oranges, from River City Holistics Health with Gold Coast Extracts

Medical Edible

1st Place - Carms, from Cascadia High 2nd Place - 1:1 CBD Slips, from Oakor and TKO 3rd Place - S'mores Cup, from Bungles Edibles

High CBD Award

Flower - Sour Tsunami #3, from Solstice Concentrate - CBD Simple, from Cannavest Edible - Lunch Box, from Florida Buds and Arborside Compassion

Non-Edible Medically Infused Product (MIP)

CBDemu, from Browns Botanicals

Best Booth

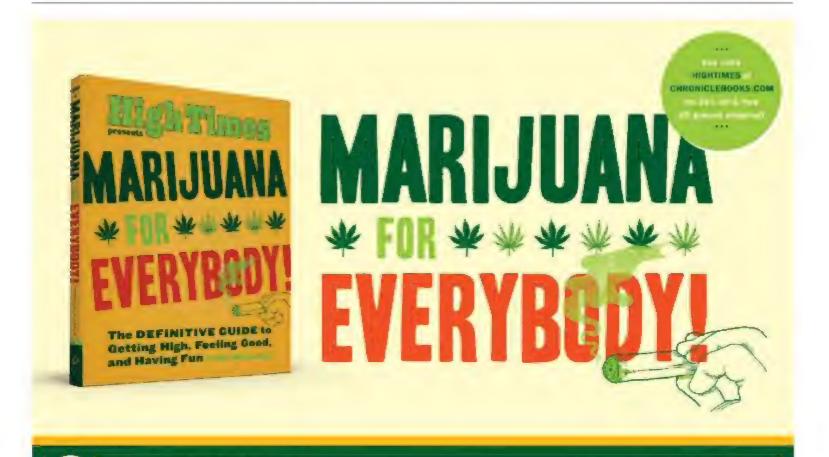
1st Place - Vader Extracts 2nd Place - Cloud Penz 3rd Place - Caviar Gold

Best Product

1st Place – Cypress Hill's Phuncky Feel Tips, from Vader Extracts 2nd Place – Cloud Penz, from Cloud Penz 3rd Place – Transdermal Gel, from Mary's Medicinals

Best Glass

1st Place - TGOD Dwreck Puck, from Nexus Glass 2nd Place - Sasquatch Glass Guitar, from Sasquatch Glass 3rd Place - Dr. Green-Thumb's Phuncky Feel Tips, from B-Real



CLASS MOUTH PIECE



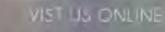
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54

Last July, legal pot shops opened across the state of Washington. With the first legal recreational crops harvested and ready for market, it's time to get commercial. Story & Photos by Dan Skye



he Cascade Mountain range separates Washington State into two regions. The divided lands are starkly different. Eastern Washington has twice the land area, but holds only one-third the population. The western half of the state has a wet, oceanic climate, and the east is semi-arid with hot summers, little rainfall, and cold winters with heavy snow.

Every few years, the issue of making Eastern Washington our 51st state pops up. Easterners feel their influence is negligible because populous

King, Pierce and Snohomish counties, which surround the Scattle/Tacoma area in the west, decide top political offices, rendering castern votes meaningless.

In 2001, state senators even introduced a bill to split Washington in two. Similar legislation was proposed in 2005. Fortunately for the new retail cannabis industry, Washington remains united. In order to fulfill its

enormous cannabis needs, Washington will require the provess of pot growers both east and west.

They Riverside (pop. 280) is situated on a vast plain in the Okanegan Highlands in northeastern Washington, about 30 miles from the Canadian border. It's home to Cannasol Farms, where harvest is in full swing when we arrive.

The lush green, gardens of Cannasol in Eastern Washington thrive in the autumn sun.



56 A Washington State of Kind High Times lanuary 2015



Temperatures are in the high 80s and skies are a cloudless blue. "It's ideal cannabis-growing country," says Jeremy Moberg, the owner of Cannasol, and president of the Sun Growers Industry Association (SGIA).

The Cannasol garden is a gorgeous expanse of green. Its footprint encompasses 45,000 square feet—about an acre. Under production is 21,000 square feet of canopy. That's about 3,000 plants, or "a ton of weed," as Jeremy says.

Under production is 21,000 square feet of canopy. That's about 3,000 plants, or "a ton of weed," as Jeremy says. He's adamant about the superiority of sun-grown cannabis. (More on that later.) But as for most Washington growers entering this new marketplace, establishing brand name recognition is paramount for Cannasol.

Washington cannabis laws prohibit producers and processors from having any financial stake in retailing their product. Vertically integrated cannabis companies aren't possible. In Colorado, dispensary owners can sell the products





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58 A Washington State of Kind High Times January 2015



that they grow; not so in Washington. Consequently, Washington growers and retailers obsess over establishing strong business contacts and marketing their brands.

The first few months of retail pot sales in Washington were plagued by shortages, which caused periodic closures of many stores. Only a handful of the 300-plus planned shops had opened by September. More significantly, many growers weren't able to secure licenses until July—and as any farmer knows, you can't rush a crop.

Herbal Nation in Bothell, WA, escaped that scenario. Its owners have been prolific pot buyers, stockpiling product for the lean times. Inside the bungalow that serves as its store, the line of customers never dwindles to less than 10. In fact, the parking lot requires a traffic director. It's busy here, and that's the point.

"We want to establish Herbal Nation as a reliable, friendly brand where people come in with smiles and leave with smiles," says Lauren Downes, Herbal Nation's manager.

With a background in cultural anthropology and organic agriculture, Downes has a well-defined idea of what a modern pot shop should be. "We'll need a 3 or 4,000 square-foot building to

Washington growers and retailers obsess over establishing strong business contacts and marketing their brands.

accommodate what we have in mind," she says. "An all-purpose cannabis store with all sorts of different products and merchandise sections with little knick-knacks and hemp products. We have an obligation, I think, to do this in the right way. And with the right business model, Herbal Nation can expand."

Keeping shelves stocked is the priority—not just with pot, but with the full gamut of products consumers expect. Herbal Nation's glass smokeware sales are brisk, but a huge segment of the cannabis-using public prefers edibles.

Three brothers have stepped into this arena in a big way, debuting their products last September.

Dan, Mike and Pat Devlin are the brainpower behind Zoots (*zootology* .com)—handcrafted, small-batch treats, infused with premium cannabis that is paired with unique blends. Mike, who

has 28 years of experience in high-growth consumer goods companies and the full food products supply chain, explains the Zoots methodology: "You put extract into flavored water and you have an edible. Or you put it into a brownie mix and you have an edible. But with blends, you use complementary natural ingredients, along with the THC, to achieve the effect you're looking for—a relaxation effect, or something more psychoactive."

The brothers have just released Zoot Drops, a premium cannabis-infused extract. You have a choice of "Kickback" or "Yippie Ki-yay." Each vial contains 10 servings of 10 mg. of THC. ZootRocks are cannabis-infused lozenges, and a single shot of ZootBlast is offered in 5 mg. and 10 mg. doses.

So-called "zootologists" carefully extract essential oils from marijuana in a contaminant-free environment using a proprietary cypress extraction method. The closed-loop system captures THC using organic cane alcohol in a cold fusion process, assuring that each serving is consistent. Mike insists, "Zoots is about having a good time without feeling uncomfortably stoned."

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60 A Washington State of Kind High Times January 2015



Notable in Washington is the number of people with no experience in cannabis jumping into the fray. More often than not, they bring marketing and merchandising experience to the burgeoning industry.

Take Blue Sky Growers in East Wenatchee. Jeff and Mona Guentzel have owned multiple businesses—government contracting, equipment manufacturing and health clubs.

"We were looking for something to change our income level. There's such potential for the product, and we want to be a company that contributes to society," says Jeff.

Luckily, their son Mike is a former California dispensary owner who was forced to close up shop due to a city moratorium on cannabis businesses. He's also an experienced grower. Once they were licensed last June, the Guentzels moved

into an industrial space and built 10 separate growrooms under 172 lights, 14 of which are LEDs for experimentation purposes. Two 500-gallon tanks pump water to all 10 rooms; each room has a 100-gallon tank with a pump.

keeps an eye on e feet of garden

Mike is confident that Blue Sky's first harvest will help abate his parents' financial worries. Jeff says, "At this point I've already spent the bulk of my planned investment. Cash flow-wise, I'm planning out for the next six weeks. I know we'll make good harvests here, the plants are looking great, but..."

Jeff pauses and gathers his thoughts. There are flaws in Washington's guidelines, one of the most prominent being the high tax rate on cannabis businesses.

"The biggest problem that I have is my accountant," Jeff explains. "All my numbers have always indicated that 25 percent that gets paid to the state—that's

just a given. But my accountant tells me that that the effective tax rate on the IRS side is like 73 percent. When I take \$100, \$25 goes to the state. I have \$75 left with 73 percent of that going to the IRS, it doesn't leave a lot left. I'm hoping there's a constitutional challenge or something. When you've got \$400,000 in infrastructure that you can't write off, that's tough."

Gecko Farms is another family-run business in East Wenatchee, with 30,000 square feet of indoor and outdoor gardens. Connie and Kevin Dietz oversee the operation and built the grow op from scratch, excavating, constructing the buildings, and installing water.

Business is booming. They hold contracts with five dispensaries and help supply three others, but Connie admits: "We have very high-quality product and it's hard to keep up with orders. We're constantly sold out."

Another problem with the new laws is the fact that growers can't ship their products; they have to deliver them. For businesses trying to gain a foothold, it's a waste of staff resources. "We're on the road all the time," says Connie. "You're allowed to charge your retailers for shipping and transportation, but it's needless stress on a business."

Nearby Monkey Grass Farms is a strictly indoor operation, occupying a

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Here's a list of some of our wins:

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- High Times Medical Cannabis Cup San Francisco
- High Times US Cannabis Cup Denver
 High Times US Cannabis Cup Seattle
- Kush Cup
- Spannabis
- · 43th Annual Hash Bash
- Highway 420 Anti-Prohibition Rolly
- Expocarnabis Sur
- Connobizz
- Nimbin MardiGrass
- · Global Marijuana March

- Emerald Empire Hempfest
- Ölympia Hempfest
- Hanfparade
 Seattle Hempfest
- Connetrade
- Expogrow
- . Boston Freedom Rally
- Cultiva Hanfmesse
- Cannafest
- Treating Yourself Expo
 - Secret Cup
 - Growmed
 - 707 Cup
 - 16th Annual Medical Marijuana Benefit Concert

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warehouse of 21,000 square feet with 4,000 plants in various stages of growth. Twenty employees run the operation, which harvests 35 pounds a week and provides product for some of the state's biggest pot shops.

Garrett Cooper, Monkey Farms' president, wants to see less of the black market. "Retailers are currently charging \$20 to \$30 a gram and more, which keeps the black market alive and well. There aren't enough of producers to provide product for the entire state."

The State Liquor Board oversees the industry and, like most bureaucracies, hasn't been speedy to license producers. As of September, only 170 licenses for producers had been issued, and over 2,000 were still pending. Industry experts don't predict sufficient product, which would help lower prices, for the next 18 months.

Even with the legal snags, no one is sorry they jumped into the marijuana industry. Washington pot laws are an exercise in evolution, and people expect improvements. However, the paucity of growers creates opportunities—and quality is the name of that game.

Jian Malihi runs Clarity Farms with six dedicated employees. It encompasses seven 3,000 square-feet greenhouses. "One of the most interesting byproducts of marijuana legalization is going to be the transition of marijuana production from gardening to farming."

They'll be converted throughout the year to accommodate the marijuana production cycle, including propagation, vegetation, flowering and harvesting.

"Nothing beats working outside,"
Jian says. "Right now, I farm pot in
greenhouses. It satisfies my intellectual
drive—adapting agricultural production
techniques to marijuana production. For
me, one of the most interesting byproducts of marijuana legalization is going to
be the transition of marijuana production from gardening to farming. I've seen
some very impressive indoor gardens
both in terms of size and technology, but
I think it would be very powerful to see a
1000-acre marijuana field."

Cannasol's Jeremy Moberg sees no other choice. "The only reason that there was ever an indoor industry was to avoid detection. We developed this big indoor industry but we can no longer point to prohibition to justify the electrical expense and the associated carbon footprint. We have to start asking what's going into it—just like other products we consume. We want to know that it's grown in a sustainable way, that it's healthy for me and healthy for the world.

"We're talking four percent of the state's power," he continues. "We're talking one percent of the nation's power—enough to power two to three million homes. *The Journal of Energy Policy* states that one kilogram of marijuana is equivalent to driving a car across the nation seven times, in terms of carbon produced to produce that electricity. That's unfathomably unsustainable."

Jeremy believes that consumer demand, and the environmental good sense that sun-growing makes, will induce indoor growers to move their crops outside.

"We're going to use the quality of this crop as a demonstration that sun-grown is the premiere crop in marijuana today," he avows. "It will command the highest prices. It will draw consumers who demand that it's grown in a sustainable way. People go to Whole Foods, they drive Priuses—they feel a responsibility to their bodies and their environment." *



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STATOOMS Your Own... STATOOMS YOUR OWN...

Homestead Book Company, the oldest counterculture book distributor in the world, is also the creator of the EZ Gro Mushroomkit—reshaping the face of our nation, one psychonaut at a time. By Mary Ought Six

Boomers, magic mushrooms, gold caps, true blues, 'shrooms—no matter the nickname, *Psilocybe cubensis* is the most famous nature-communing, musicenhancing, breathing-wall-producing psychedelic cooked up by Mother Nature. It's been speculated that the use of psychedelic mushrooms has been part of human development for thousands upon thousands of years, though for most of that time, finding the right mushrooms meant going on a hunt—a risky hunt, as *cubensis* can be mistaken for its inedible and poisonous cousins.

Enter the 1960s and '70s, a period of experimentation and consciousness expansion, when exploring the psychedelic frontier was par for the hippie course. People still wandered the fields where the dung of pasture animals like cows provided fertile ground for a shroom hunt. But after all those years, the hunter-gatherer era among mushroomheads would soon be drawing to a close. The grow-your-own revolution was under way, and Homestead Book Company was its great pioneer.

You may have noticed the full-page

ad for Homestead's EZ Gro Mushroom-kit in the pages of *High Times*. The company has been running that ad for over 30 years, promoting the safest route for gathering shrooms: plucking them from a sterile environment that you've created and controlled from the start. But before the development of the mushroom kit, there was Homestead Books—a pioneer in its own right, and one of the first distributors of *High Times*. David Tatelman is the hippie mastermind behind Homestead, and on the occasion of *HT*'s 40th anniversary, he recalled those earliest

66 40 Years of Growing Your Own Shrooms!



days when he was running underground comics to headshops and bookstores all over Washington State in his Chevy Vega station wagon.

In 1973, Homestead carried *The Complete Guide to Growing Marijuana*, *How to Grow the Finest Marijuana Indoors* and the *Field Guide to Psilocybin Mushrooms*. The titles sold well, but David's counterculture business really started booming in 1974 with the publication of *High Times*.

"Man, it just doubled business, *tripled* it," he recalled. "There was such a demand for that magazine. We had stickers and we'd raise the cover price, because we were actually buying them secondhand, not directly from *High Times*—so everyone was marking them up. But it didn't matter; the magazine was *hot*."

After the first few issues, Homestead became a direct distributor, and thus a 40-year partnership was born.

Around that time, the knowledge that psychedelic mushrooms could be grown indoors under controlled conditions bloomed like a spore. Also around that time, the first international Teonanacatl Mushroom Conference was held in Olympia, WA. It attracted "everybody who was anybody" in the world of shrooms. "It became possible for us amateurs to intermingle with the more academic mushroom people—for instance, Paul Stamets, who was then a student at Evergreen

State College, known colloquially as Psilocybin University," David explained. "Kids were finding mushrooms right at Evergreen State."

There was a general wariness toward the amateurs on the part of the academics—but in the study of mushrooms, it's often the amateurs who discover new mushrooms and are the first to experiment with them. At the first Teonanacatl conference, that hands-on experience gave the amateurs a special kind of clout.

It was at this magical conference that David met Bob Harris, who literally wrote the book on growing wild mushrooms (called Growing Wild Mushrooms). The two pooled their resources and put together the company's first mushroom kit, based on Harris's book. That first kit was popular, but it resembled a science-fair project, complete with Petri dishes, a pressure cooker and all sorts of sterilization procedures. Despite the user-unfriendliness, however, the kit sold well, and it gave Homestead Books a shot in the arm, becoming literally a third of the company's business—its most profitable product by far.

In 1975, when the kit was first on the market, David ran Homestead out of a house in Seattle zoned for commercial use, and the basement became his assembly line. It was a very lax work environment, with too many staffers and a workspace overflowing with nitrous

tanks and ping-pong games. "I don't know how we made money, but somehow we did," David said with a laugh. "Things were going really well at the time. We had a women's softball team that won the city championship."

Books on mushrooms were a hot item as well. "There was a great demand for books on identifying [magic mushrooms], and there really weren't any," David recalled. "That's why I published the *Magickal Mushroom Handbook*, which sold many thousands of copies." But mushrooms weren't the company's only niche: Two of Homestead's most popular authors were Ed Rosenthal and Jorge Cervantes, both of whom had written essential books on marijuana cultivation.

Book conventions were hopping places to meet high-minded authors, and that's where David first encountered not only his two top pot writers, but also the likes of Timothy Leary, Ken Kesey and Steve Gaskin. They would all smoke weed, exchange stories and find the most happening spots. "All the pot smokers hung out together," David said. "We would get together every night, hit all the parties and get high, try to find the free booze So we became friends—a marijuana cabal, I guess."

David's business was flying high. Then again, anyone who knew him in college might have predicted as much—because before Homestead Books was even a CELEBRATING AU YEARS The Easiest way to grow your own mushrooms
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glimmer in his psyche, David Tatelman was already walking the underground walk at the University of South Florida.

Those college days turned out to be a fitting prelude for a psychedelic-mush-room-kit creator and purveyor of psychonautical books. David's first foray into publishing was his underground newspaper, *The Aquarian*, which was distributed all over campus. The paper covered Jim Morrison's indecency trial *National Lampoon*—style and picked up a respectable readership for a local publication.

School turned out to be rewarding in other ways, too. "I think the first time I did mushrooms—and LSD, and peyote—was when I was a hippie at the University of South Florida," David said. "I remember having sex for the first time while on LSD."

But it wasn't all sex and drugs and rock'n'roll when it came to boomers. Though David admitted that "mushrooms and cocaine provided a great experience," he also asserted that partying on mushrooms felt like a travesty, for the most part. For David, mushrooms have always been a spiritual guide—something to be taken in a natural setting, alongside rushing waters or in a peaceful forest glade.

Over the years, Homestead's intricate

science-fair project of a mushroom kit was simplified and tweaked until it became the EZ Gro, the near-foolproof way to cultivate boomers safely at home. The kit comes with two bags. The first is a grain sack, which also contains the mushroom spores on a swab. Simply undo the tabs to release the spores without opening the bag. In a couple of weeks, the colonized grain will turn white (this part doesn't require any water-just time and a few minor environmental controls). The second sack contains compost; the colonized grain goes into this larger bag and the mushrooms just start growing. The Homestead mushroom department is open from 9 a.m. to 4 p.m. Pacific Standard Time, so anyone using the kit can call in with questions.

David credits the kit's success with helping to promote shroom culture across the United States in the last few decades. The culture "has spread far and wide, and I think we have a lot to do with that," he said. "Mushrooms are more acceptable to more people than, for instance, LSD, which many people think of as dangerous and a hard drug."

These days, Homestead continues to publish books, sell mushroom kits, and make great strides in the realm of advancing personal freedom. The company has played its shroom hand safe and stayed clear of the law. It also lays claim to being the oldest counterculture book distributor in the world as well as *High Times'* longest-running advertiser. In 2012, Homestead celebrated its own 40th anniversary: Ed Rosenthal and Jorge Cervantes joined in the festivities, the tinctures flowed freely at the Seattle basement banquet, and David had such a good time that he needs the photos taken to remember the details.

David sees Homestead's legacy as centered on the First Amendment and the larger cause of freedom. In a very real sense, mind expansion has been at the heart of the company's business, both with its books and mushroom kits, thereby contributing to making our world a freer, more open place. "I think we had a lot to do with the way this country has changed," David observed, before adding with an irreverent grin: "I think it's pretty cool that I've milked this hippie thing for 40 years and actually made a living at it. It's been great. Mushrooms have been very, very good to me." **

To order your own DIY mushroom kit, go to homesteadbook.com.









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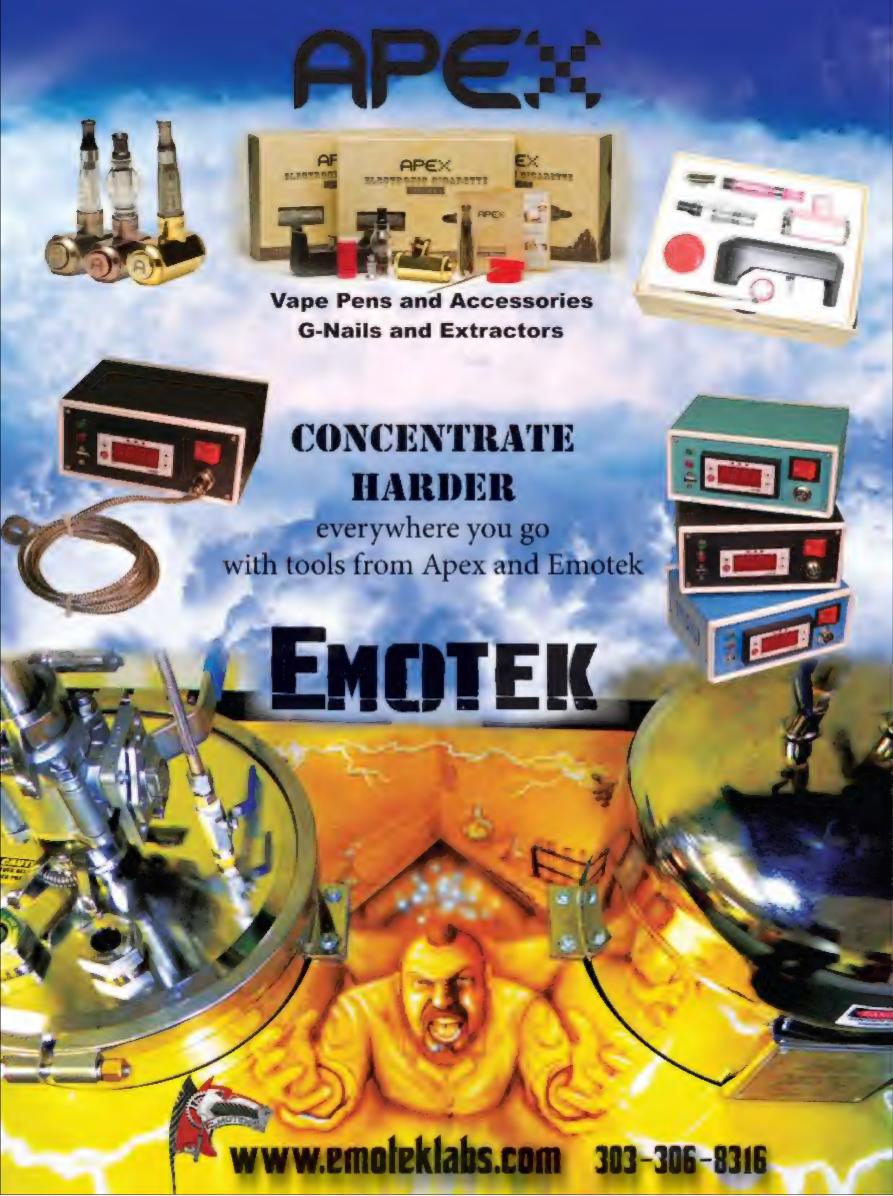


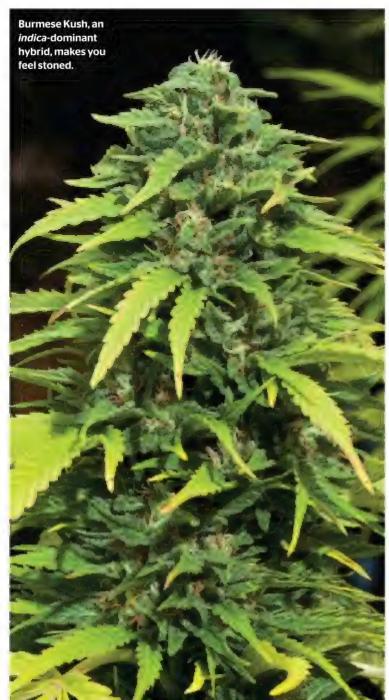


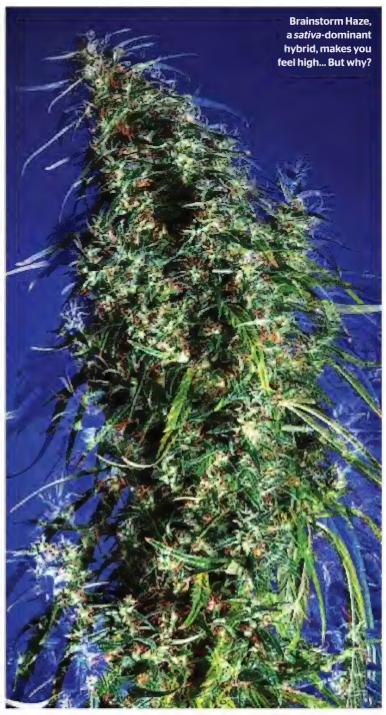












The Truth About



Understanding the differences between species in the genus Cannabis. By Nico Escondido

A long time ago, when only landrace genetics existed in the genus *Cannabis*, the terms *Cannabis sativa* L. and *Cannabis indica* Lam. were created to identify these two species of the *Cannabaceae* family. Today, those taxonomical terms have been shortened to *sativa* and *indica*, but they can still be confusing—and sometimes quite misleading—for the casual toker, the new medical marijuana

patient and even the everyday stoner.

The differences between these two species are far-ranging: everything from how the plant looks, to how it grows, to how its effects are experienced when consumed. But why do these differences exist? Why does an *indica* plant grow shorter than a *sativa*? Why does a *sativa* deliver such a distinct psychoactive experience as compared to an

indica? To arrive at these answers, we must use genealogy and scientific data to trace today's strains back to their original landrace. Having loads of lab results, such as cannabinoid levels and terpene profiles, also helps this endeavor quite a bit. So we invited a knowledgeable friend from HT's partner lab, Steep Hill Halent, to weigh in ... and what we found may surprise you.

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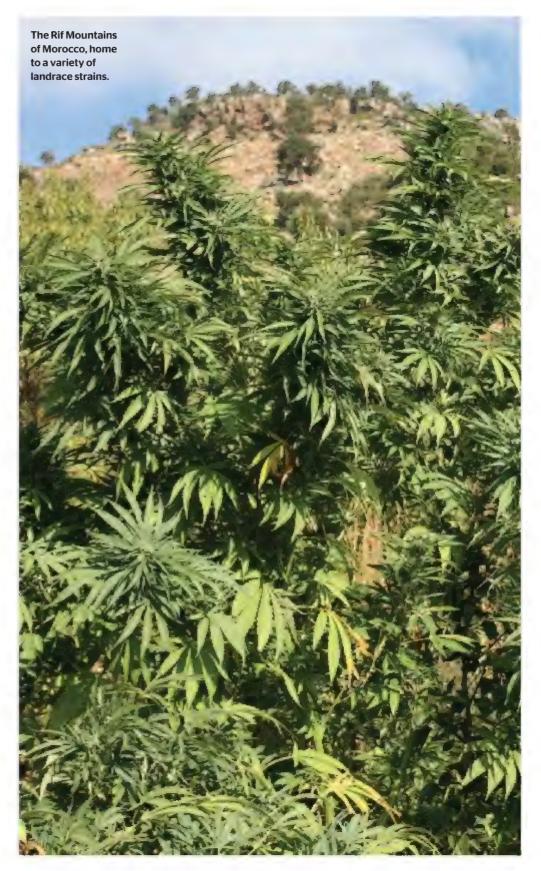
Origins of Indica and Sativa

While there is no way to determine how long cannabis has been growing on the planet, the earliest evidence of human use dates back thousands of years to the Far East. The origins of the indigenous cannabis landraces have been traced to South and Central Asia, with wild cannabis stretching from the fringes of the Middle East all the way to China and Mongolia further north. But how did different species of cannabis develop separately around the same latitudes of Earth?

Like all living organisms, the cannabis plant has evolved and adapted to its environment (and continues to do so to this day). With the native regions of cannabis located in relatively close proximity to one another, the answer to why the species evolved differently lies in examining their climates of origin. These climates can vary greatly due to the difference in geographic locales, ranging from the foothills of the Himalayas, to the lowlands of the Hindu Kush valleys, to the peaks of the Rif Mountains in Morocco.

According to Kymron deCesare, chief research director at Steep Hill Halent Lab in Oakland, CA, the major difference in evolution between sativas and indicas is that sativas developed to take advantage of a humid environment. This includes the development of thin, lanky stems and long, narrow leaves to promote greater respiration. Indicas, on the other hand, developed to survive in drier, more arid climates, evolving into short, stocky plants with thick, stubby leaves designed to minimize the loss of water through respiration. It thus stands to reason that thousands of years ago, true landrace indicas such as the short, squat Afghanica could be found at higher elevations, where the air was thin and brisk and the water scarce. Meanwhile, in the valleys below were the sativas, growing lean and tall in the lush, wet forest areas.

Fast-forward a couple thousand years to 1753, when a young scientist named Carl Linnaeus first classified the *Cannabis* genus using what would become the modern taxonomic nomenclature. At the time, Linnaeus thought the *Cannabis* genus was monotypic—meaning having only a single species—and he named that species *Cannabis sativa* L. (the "L." stands for "Linnaeus," to indicate the authority who first named it). Three decades later, in 1785, another noted scientist and evolutionary biologist, Jean-Baptiste Lamarck, identified a second species of cannabis



that he named *Cannabis indica* Lam. (for "Lamarck") after examining the plant specimens he had collected in India. Finally, in the early part of the twentieth century, a group of Russian botanists and plant explorers identified a third species known as *ruderalis*. *C. ruderalis* is unlike *C. sativa* and *C. indica* in that it is a hardier, fibrous plant much like hemp and possesses little to no THC, making it non-psychoactive.

Examples of Pure Landrace Strains **Sativas**

Thai Burmese Pakistani Mexican

Indicas

Afghanica (Afghani) Hindu Kush Moroccan/Ketama



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Cultivation and Physical Aspects

These evolutionary trends aided the earliest cannabis plants in terms of respiration, thereby increasing their rate of photosynthesis, which in turn increased flower and seed production—thus ensuring that their genetic lines would survive and thrive.

Today, in much the same way, marijuana growers utilize the evolutionary characteristics of *indicas* and *sativas* to boost their yields, depending on the grow environment provided in their gardens. Indoor growers may desire shorter plants due to space constraints and therefore choose *indica* varieties to grow. Outdoor growers may have to contend with a hot and humid climate much of the time and therefore choose the better-respiring *sativas*. Or an outdoor grower may find that the hardier, stockier *indicas* are more resistant to pests in the garden, while an indoor grower may find that thin, wispy *sativas* are more resistant to molds or powdery mildew in their growroom.

Everything depends on the environmental conditions of the grow space and the individual characteristics of the strains chosen by the grower. And even then, the result isn't as predictable as it may sound, since every genotype has the possibility of exhibiting new traits (or phenotypes) that can vary immensely from the norm when the plants are grown in conditions to which they're unaccustomed. In other words, what you see with *indicas* and *sativas* isn't always what you get.

Indica- and Sativa-Dominant Hybrids

The term "hybrid" is potentially a confusing one, since anything that isn't a 100 percent pure landrace—a rare commodity these days—is technically a hybrid strain. For *High Times*' purposes at our Cannabis Cups, as well as for this list, we use a 70/30 ratio to determine whether a cannabis species is dominant in any given strain. Anything lower than 70/30—for example, a 60/40 or 50/50 ratio—is considered a non-dominant or well-balanced hybrid.

Examples of Sativa-Dominant Hybrids

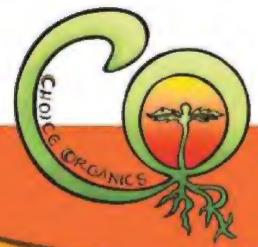
Haze Blue Dream Strawberry Cough

Examples of Indica-Dominant Hybrids

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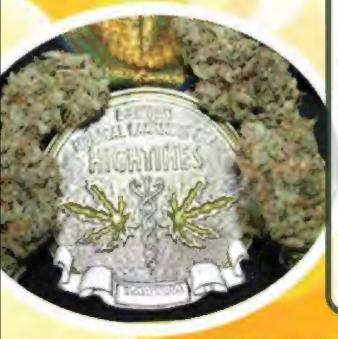
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Myrcene is the major ingredient responsible for 'flipping' the normal energetic effect of THC into a couchlock effect.

Cannabinoids, Terpenes and Psychoactive Effects

But what about the different effects that you get from smoking *indicas* versus *sativas*? And how intrinsic are those effects if the environmental conditions can vary so much from garden to garden? Well, that's where things get *really* interesting.

Many cannabis users experience the *sativa* "high" as uplifting and cerebral, while the *indica* "stone" is more of a body buzz that may couchlock the user for hours in front of the TV. But can these effects be directly attributed to the differences between these two species—and, if so, why?

"The terms *sativa* and *indica* are only really valid for describing the physical characteristics of the cannabis strain in a given environment," deCesare said. "They are not nearly as reliable as terms for making assumptions about energy versus couchlock."

That's because by its very nature, THC's effects are energetic—meaning that both *sativas* and *indicas* possess a level of THC that will create an uplifting, euphoric feeling when smoked. So why do some *indicas* leave you in a vegetative state instead?

According to deCesare, *sativas* and *indicas* generally share the same cannabinoids as well as the same terpenes—the chemical compounds found in cannabis that contribute to the flavor and aroma of the flowers. These terpenes, or terpenoids, are also found in many other plants; indeed, they create the essential oils and extracts that we use for fragrances and perfumes. Not only do terpenes exist in *sativas* and *indicas*, but they exist in similar ratios as well.

However, deCesare points to one major exception that helps explain the differences in psychoactive effect between *sativas* and *indicas*: namely, "the consistently elevated levels of the terpenoid myrcene in *C. indica*, as compared to *C. sativa*." In fact, according to the numerous studies he's conducted along with cannabis researchers like Dr. Donald Land and Dr. Ethan Russo, "myrcene is the major ingredient responsible for 'flipping' the normal energetic effect

of THC into a couchlock effect."

This means that what many of us thought about *indicas* versus *sativas* isn't necessarily true: The THC that is typically associated with the psychoactive properties of cannabis is not the only factor at work in making us high. In fact, the theory of the "entourage effect" proposed by Dr. Russo, which holds that different combinations of cannabinoids and terpenes work together to create the distinctive effects from one strain to another, is a much better explanation for the psychoactive differences between sativas and indicas. Indeed, as far as deCesare is concerned, the terpenoid myrcene is the single most important variable in determining these effects.

Asked about the evidence used to support this conclusion, deCesare replied: "This can only be reliably determined through the lab testing of cannabis. When we started doing analytics on cannabis, there were maybe 1,000 different strains. That number now exceeds approximately 3,000 strains. This conclusion is based on the analysis of over 100,000 different samples tested over the last seven years."

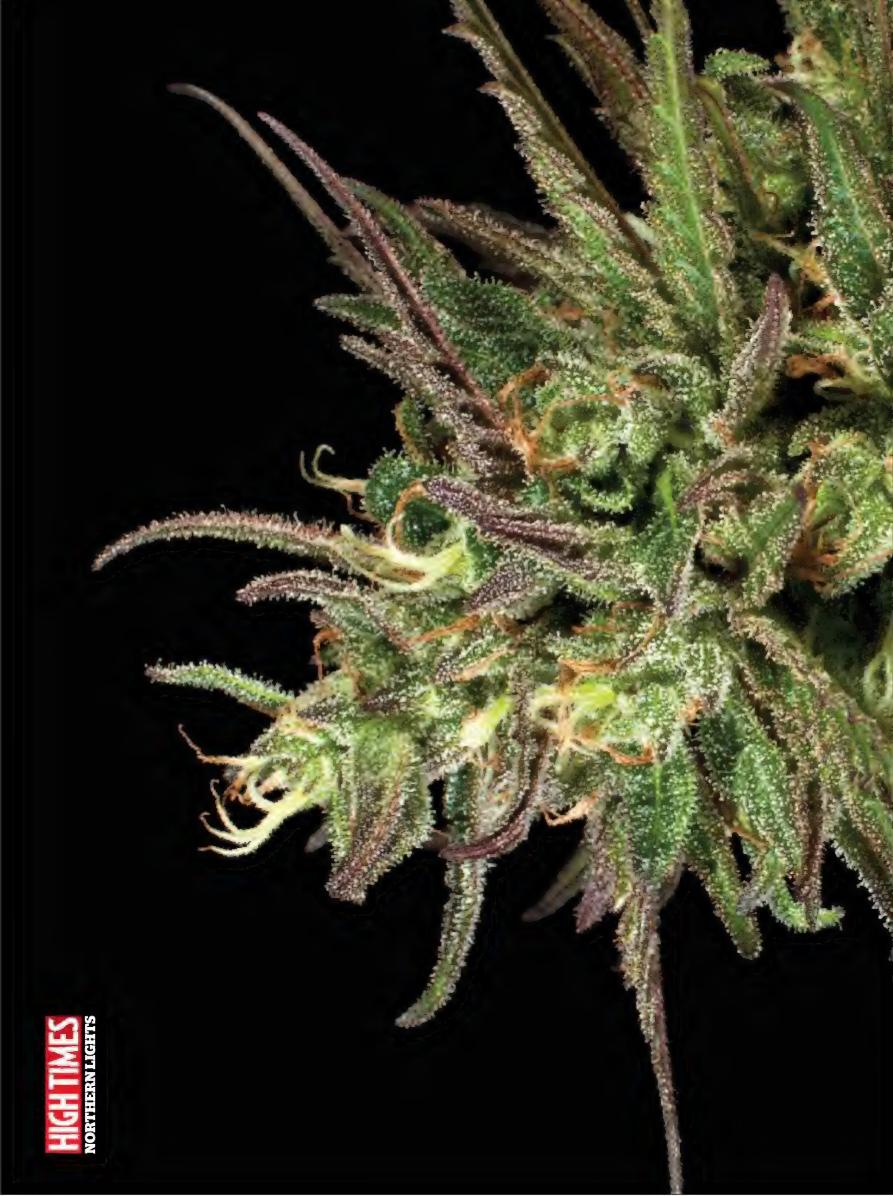
Glorious ... Myrcene?

As far as terpenes go, myrcene is pretty common—it exists in many other fruits and plants grown the world over. Mangoes and hops are perhaps two of the best-known when it comes to elevated levels of myrcene.

"Notice the warm, relaxed feeling you get from a couple of hoppy beers?" deCesare asked. "That effect is, to a good extent, due to the myrcene present from the hops."

So what myrcene levels are necessary to get you feeling really relaxed or stoned, as most of us would say? The research done at Steep Hill Halent suggests that a myrcene level at or below 0.4% in flowers doesn't have much impact on the "energetic effects" that THC contributes. But when the myrcene content starts to head past 0.5%, "the strain becomes increasingly more sedative and stony," deCesare noted. "OG Kush is considered by most to be a strong couchlock flower at about 1.25% myrcene. A few strains have a myrcene content in excess of 3%. Other chemicals may well play minor roles in the couchlock effect, including CBD, CBN and linalool, when they are present in couchlock strains—but they aren't always present or as influential."



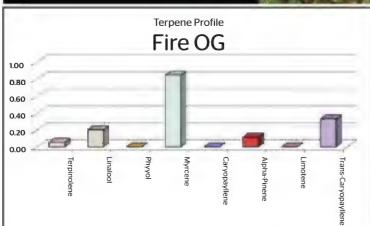


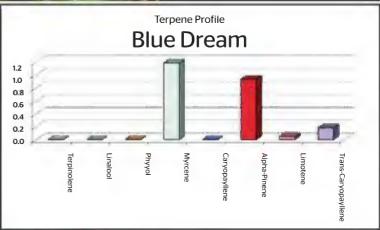












The terpenoid myrcene is most responsible for the effects of both these sativa- and indica-dominant genetics.

What's Next?

In conclusion, I asked the good Dr. deCesare what possibilities and opportunities the future might hold for legal cannabis.

"Moving forward to a time when the USDA [US Department of Agriculture] and FDA [Food and Drug Administration] oversee cannabis-distribution regulations," he replied, "they will insist on accurate labeling to assure that if a customer purchases an energetic strain—or a couchlock strain—then what they get is what they paid for. And the only reliable way to make this determination is by labtesting for myrcene content."

Interestingly, a recent study released by the National Institutes of Health and published by the National Library of Medicine, Discriminating the Effects of Cannabis sativa and Cannabis indica, noted that in a survey of medical cannabis users, "a preference for *C. indica* was [shown to be] statistically significant for pain management, helping with sedation and sleep. *C. sativa* was preferred for euphoria and enhancing energy. The conditions reaching statistical significance for *C. indica* preference were: non-migraine headaches, glaucoma, neuropathy, spasticity, seizures, insomnia, and joint pain. For *C. sativa*, no conditions reached significance."

Unfortunately, due to the legal ramifications for the private labs and universities that can actually do this type of work—to say nothing of the lack of federal funding available for cannabisrelated research—this particular study was conducted via an anonymous Internet survey, which means that it lacked

the basic conditions of a proper clinical trial. The researchers who conducted the survey admitted as much, concluding in their abstract that the study "had limitations, with the two species having different effect associations on symptoms and conditions, *possibly because of ingredient differences*. Future surveys and subsequent prospective definitive trials are needed to confirm the findings" (emphasis added).

"Possibly because of ingredient differences"—such as, say, varying combinations of cannabinoids and terpenes? As for the need for "future surveys" and "subsequent ... definitive trials," well, guess what, NIH and our friends in the federal government: We're already way ahead of you. Isn't it time that you caught up? *

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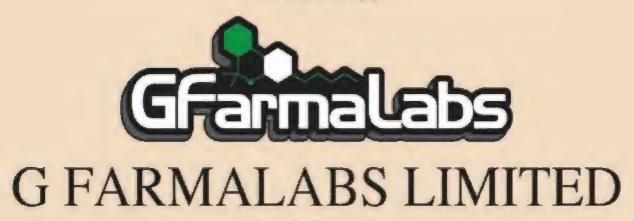
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10 Easy Steps for Successful Cloning

Mastering the process of cloning early on will help ensure the future of your garden and allow you to be a more versatile grower. By Dru West. Photos by Duke Newport

clone is simply a cutting-i.e., a severed part of the plant-that grows roots and eventually stabilizes as a genetic replica of its donor. This is possible because each of the plant's individual cells contain all of the information necessary to reconstruct the whole plant, a kind of genetic copy of its "blueprints." If a cutting is taken and rooted in another location, that cutting has the potential to grow into an exact replica of the mother plant it was taken from. This means that any branch, leaf, stem or flower, no matter how big or small, can generate an infinite number of genetic facsimiles if the conditions are right.

Micro-propagation or "tissue culture" is the relatively new science of growing plants in vitro (in test tubes) from single cells found in certain parts of the plant—a leaf, stem or flower specimen. Due to the high volatility of these specimens, such procedures must be performed in sterile laboratories commonly unavailable to most homebased cannabis growers. This article will explain everything you need to know to confidently clone your plants with a near-perfect success rate using branches as your starting material.

Healthy clones lead to more vigorous plants and bigger harvests.



What You Need

All of the items on the following list can be purchased for around \$100, and many of them are reusable. Clones don't require their own light during the process if they're already in a well-lit veg room. If your clones will be kept outside of the veg room during the rooting process, any fluorescent light will suffice.

Propagation tray*
7" propagation dome*
10" x 20" seedling heat mat*
Perlite (rinsed well with water)*
Cloning gel*
Shot glass*
1½" rockwool cubes
Disposable scalpels

Distilled water (at room temperature, 70°F) Liquid cloning solution Mycorrhizal fungi Restaurant-style 1-gallon soup container* pH meter* pH Up and pH Down solutions Bleach wipes 99% isopropyl alcohol Paper towels Sterile aloves Duct tape Permanent marker for labeling Grow journal 16 oz. plastic cups (red) 16 oz. plastic cups (clear) *Indicates reusable items

8" x 8" glass baking dish*

Understanding You Role

Your biggest responsibility is to make sure that the cuttings are comfortable and stress-free while they are producing roots. Environmental stress and mishandling during this time can lead to all sorts of complications, including mutation, a decrease in yield and/or potency and, in some strains, auto-flowering. The overall health of your clones will determine the future health of your garden.

Remember that cloning is essentially performing surgery on your plants. Every cut made is an open wound that is susceptible to infection and needs to be treated with care. All of the same concerns that a person would have prior to undergoing surgery are equally valid for your plants: "Will I be comfortable during this? Have all the tools been sterilized since the last guy? Will I be in a safe and sterile environment, free from the risk of infection during my recovery?" Your job is to guarantee these things for your plants throughout the entire process.

After the initial process of taking clones, all you can do is to make sure the lights stay on and that it doesn't get too hot or cold in the room. Many growers make the mistake of overhandling the developing clones, picking them up every day and turning them upside down to see if the roots have appeared yet. Wondering whether the cuttings are too wet or too dry, they may be tempted to give the rockwool cube a little squeeze and end up smashing up the just-forming roots. So, basically, it's hands off for at least the first five to seven days or so, until you see roots growing out the bottoms of the cubes.

Now that you understand your role, I will explain in 10 easy steps how to produce healthy, robust and vigorous clones, West Coast Masters-style!

1. Sanitize

Before doing anything else, use bleach wipes to sanitize the area in which the tray will sit, as well as all other surfaces within your workspace. Be sure to sterilize all of the tools and equipment using a clean paper towel soaked with 99% alcohol. As a final precaution, sterile gloves should be worn throughout the entire process. Please remember that cleanliness is the key to successful cloning.

2. Setting Up

Plug in the heat mat and place it beneath the 10" x 20" propagation tray. Add about a half-inch of rinsed perlite to the tray. The perlite will raise the cubes above the bottom of the tray, preventing them from getting too warm. It also allows airflow beneath the cubes and spurs roots to grow down toward the water below.

Vigorously shake the cloning gel and pour it into the shot glass, filling it half-way. This is a better alternative to placing the cut branches directly into the bottle, which can cause contamination. Position your glass dish, shot glass, cloning gel and scalpels as near as possible to the dome. Keeping everything close within the sanitized area will help reduce stress and the risk of infection for the clones.

3. Preparing the Cloning Solution

The cloning solution is a low-level nutrient mixture that provides the necessary elements for the clones to thrive while developing roots. Using it can cut down on rooting time and result in much healthier, more vibrant clones. Should you decide not to use it, the clones will likely be fine—just less vigorous at first.

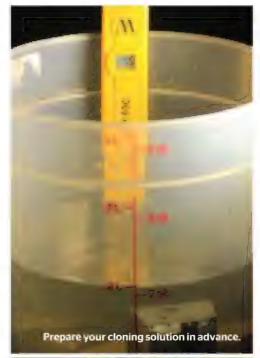
If the clones have no source of energy to get them through the week or so that it takes to form roots, they will be forced to consume their own stored energy. In other words, they have to go into survival mode and sacrifice a couple of their own leaves in order to stay alive. That's no way to start a life, so hook them up with the cloning solution properly by following these steps:

Add a half-gallon of distilled water to the 1-gallon container.

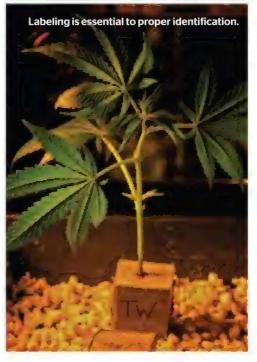
Adjust the pH of the distilled water to 5.5.

Add the rockwool cubes that you plan to use for a single tray. Typically, the maximum capacity for the tray will be from 10 to 12 cubes, depending on the size of the clones.

Let the rockwool soak for five minutes and then pour out the water, being sure to keep all







the rockwool cubes within the container. They are now rinsed and pH-adjusted.

Add the remaining half-gallon of distilled water into the container with the cubes.

Following the recommended dosage on the product label, add the cloning solution to the 1-gallon container and stir it around gently with the rockwool cubes.

Adjust the pH to 5.5 and you're almost ready to start cloning.

4. Setting Up the Cubes in the Tray

Remove the rockwool cubes one by one and space them equally in rows of two along the inside of the tray. Give them plenty of space, as you don't want the cuttings to touch each other while they're in the dome. Overlapping leaves will form condensation between them, which could lead to mold and mildew problems.

Pour half of the remaining clone solution into the glass dish (for use in step 6) and pour the other half directly into the propagation tray, where it will settle into the perlite. This liquid will provide the moisture needed to keep up the humidity levels in the dome and give the roots something to look for.

5. Labeling

Countless strains can blame their extinction on faulty labeling. No matter how good your memory is or how well you think you can identify each of your strains, mistakes are made from time to time. The best policy is to label everything. Write the name of the strain directly on the sides of the rockwool cubes and label the outside of the tray using pieces of duct tape. Just to be extra sure that everyone is well accounted for, make a diagram of their arrangement in your grow journal.

6. Choosing and Removing Branches From the Donor Plant

Not all branches are created equal. The branches I select for clones share four characteristics:

They are healthy and vibrant.

The veins in the leaves are clean and translucent.

They have a structure consisting of at least six nodes.

The diameter of their stems is equal to or greater than the diameter of the holes in the rockwool cubes.



92 10 Easy Steps for Successful Cloning

Once a suitable branch is chosen, remove it by making a single cut as close to the main stem as possible using a sterile scalpel. This is the first or primary cut of the two you'll make to create the clone. Place the severed end of the branch into the solution-filled glass dish immediately after the primary cut is made. Exposure to air during this time will cause the cells within the cut part of the branch to oxidize and die. To prevent this, the second and final cut must be made while the branch is submerged in the cloning solution.

7. Making the Final Cut

The final cut should be made through the center of the fifth node from the tip of the branch. The cut should be made at approximately a 45-degree angle to increase the surface area of the wound from which the roots will grow. Once the cut is made, quickly remove the cutting from the water, gently shake off the excess water, and place the cut end into the cloning gel contained in the shot glass. Let the cutting sit in the gel for about 15 seconds and then transfer it into its corresponding rockwool cube.

Resist the urge to push the cut end of the clone down beyond the bottom of



the hole in the cube. If the diameter of the cutting's stem is equal to or greater than the diameter of the hole, it will fit securely enough. Pushing it down into the rockwool can harm the stem and stress out the clone.

Until the clones have developed roots, they will rely heavily on their leaves to absorb the water vapor they need to stay healthy and hydrated. Some growers cut off the tips of the fan leaves in an effort to increase the surface area with which the leaves can absorb water vapor. Using a humidity dome and heating mat provides enough moisture that cutting the leaves is unnecessary. I only do it to reduce the size of overly large leaves instead of removing them entirely.

8. Set It and Forget It

Close the vents on the dome lid and place it back over the tray once all the cubes have been filled. Make sure none of the leaves are pushed up against the dome and that they are not being pinched in between the lid and the tray. Condensation will begin to appear on the inside of the dome as the heating mat increases the temperature and humidity to optimum levels. Be sure to open the vents on the lid after condensation has covered the inside of the dome.

Remember: Don't mess with the clones. They will be fine without you manhandling them. Just leave them alone until you see roots emerge from the bottom of the cubes. Once the roots are between a half-inch and 1 inch long, the cuttings are ready to transplant.

9. Transplanting Using the West Coast Masters Clear Cup Method

A while back, I thought to myself: "Wouldn't it be great if I could see through the pots to monitor the development of my clones' roots? That would allow me to know exactly when it's time to transplant them into bigger pots." This led to the invention of the West Coast Masters Clear Cup Method.





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It is crucially important to transplant your cuttings before their root tips dry out or they become root-bound. The health of the roots during the clone stage will determine the strength and vigor with which the plant will continue to grow. Either you transplant a cutting on time and the plant continues to thrive, or you miss it and the plant spends the next couple of weeks with hindered growth while trying to recover. The West Coast Masters Clear Cup Method allows you to view the roots, which removes the guesswork and allows you to transplant the clones at the perfect time.

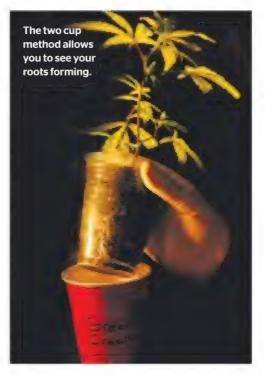
Start by cutting drainage slits around the bottom edges of both the clear and red plastic cups.

Label the red cups with the permanent marker. Include the name of the strain and the date of the transplant.

Fill the clear cups halfway with organic soil.

Sprinkle a small scoop of mycorrhizal fungi over the soil in the clear cups to help the roots quickly acclimate to their new surroundings.

Place the rooted clone in the center of the clear cup and, gently but tightly, pack the soil to just above the top of the rockwool cube.



Place the clear cup containing the newly transplanted clone directly into the corresponding pre-labeled red cup, where they will be ready to be watered.

10. Watering

Since the soil already contains plenty of nutrients, it isn't necessary to add any fertilizers to the first watering. The clones are very sensitive at this stage and can easily be shocked by overfeeding. This can be a huge setback—one from which it could take the clones weeks to recover. Remember: You are feeding the soil, not the plant.

It is also very important that you do not overwater the clones during their root development. Aside from structural stability, the main reason that plants form roots is because they are looking for water. If you overwater the cups, the roots won't be in any hurry to grow larger. Also consider the fact that there are only a few roots to consume the water at first anyway. You are better off watering less, but more frequently. This is the advantage of using the Clear Cup Method: You can tell if the soil is wet or dry, and you can monitor the root growth simply by lifting the clear cup out of the red cup.

If everything is done correctly, in about a week's time the roots will hit the bottom of the cup and the cuttings will be ready for transplant into larger containers. *

For a complete guide to the West Coast Masters Method, check out Dru's book, Secrets of the West Coast Masters: Uncover the Ultimate Techniques for Growing Medical Marijuana, available at westcoastmasters.com.







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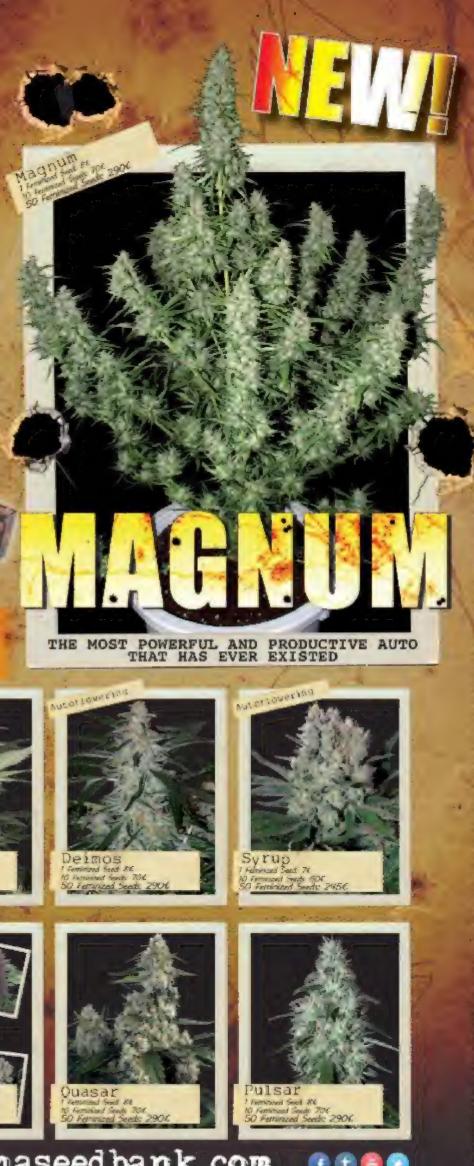
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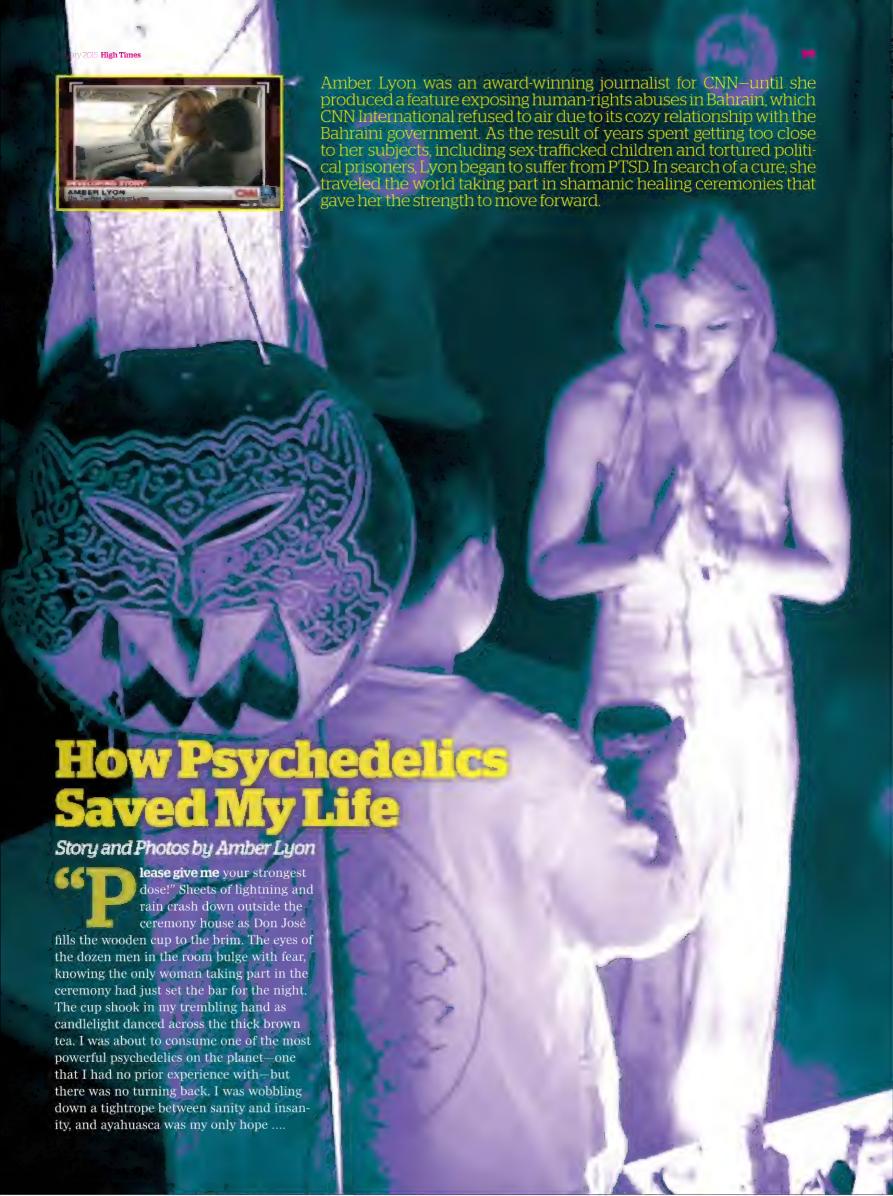
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100 How Psychedelics Saved My Life High Times January 2015

Psychedelics were an odd choice for someone like me. I grew up in Middle America—St. Louis, MO, to be precise—in a home overflowing with DEA-generated anti-drug Kool-Aid. Throughout my childhood, my grandmother would record the fear-mongering anti-drug segments from TV news magazines and force me to watch them on a monthly basis, in order to show me how Swisscheese-like holes would be eaten into my brain if I dared to touch any of these dangerous substances.

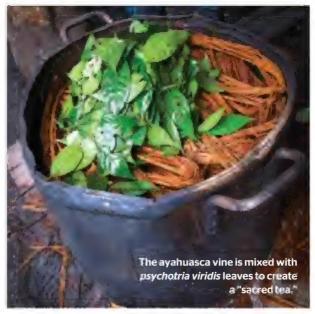
The worst "drug" that I ever put in my body was a couple of puffs on a joint in college. Although I was strongly antidrug use, I noticed a disturbing trend while on the streets of America covering our nation's Drug War as a CNN investigative correspondent: "Illegal drugs" were being replaced by legal prescription medications, with Xanax and Oxy-Contin becoming the new crack and heroin. As I shadowed the DEA on busts across the country, I saw more and more dealers getting thrown in prison for selling prescription medications.

One of my final investigations while working for CNN covered an NICU (neonatal intensive-care unit) in East Tennessee that had been forced to double in size to handle the influx of "oxy tots"-children born in dire need of morphine shots to attenuate the unbearable pain of oxycodone withdrawal inherited from their mothers' addictions. Witnessing a needle of morphine piercing a tiny, flailing, bloodshot arm to placate the newborn's gut-wrenching cries of withdrawal pain was enough to convince me that the War on Drugs is a disgraceful failure, and that our nation is severely confused when it comes distinguishing between a dangerous drug and a beneficial medicine.

I was drawn to journalism at an early age by my desire to provide a voice for the "little guy." For nearly a decade working as an independent journalist and a CNN investigative correspondent, I became a spokesperson for the oppressed, the victimized and the marginalized. My chosen path of "immersion journalism" brought me close to the plight of my sources, living the story to get a true understanding of what was happening to them.

After several years of reporting, however, I realized an unfortunate consequence of my style: I had immersed myself too deeply in the suffering of the people I covered. I began to have trouble sleeping, as their faces appeared in my darkest dreams. I spent too long

absorbed in a world of despair, and my inability to keep it separate from me allowed the trauma of others to settle inside my mind and being. Combine that with several violent experiences while working in the field—including being detained at gunpoint by machine-gunwielding Bahraini security forces and shot at by police with "less than lethal" rounds in Anaheim, CA, while covering a protest—and I found myself in the worst period of my life. The years I'd spent reporting on the edge had led me to the brink of my own sanity.



Ayahuasca translates as "vine of the dead" or, better, "vine of souls"—so named for its ability to allow its user to absorb wisdom

he shamans say that ayahuasca calls to those she can heal. To say that a magnetic force buried deep within my soul had dragged me from the urban jungle of Los Angeles to this actual jungle in Peru would be an understatement. At the height of my PTSD symptoms, sleeping, eating, writing and even thinking became nearly impossible, as my fight-or-flight impulses and uncontrollable mind raced from one incomplete thought to the next. I felt as though I were plunging down a dark vortex, flailing my arms desperately trying to grab onto something and pull myself toward the light-but there was nothing to catch my fall, and I knew that I wouldn't go near prescription medications after what I'd learned from my investigations about their sinister side effects.

In March 2013, a firm voice emerged from my heart: "Ayahuasca," it said. "Ayahuasca will help you." I had heard about this sacred tea from a dear friend months earlier, who had raved about its healing benefits. The numerous anecdotes I researched online described ayahuasca's ability to treat and cure depression, PTSD and spiritual starvation.

This soft, crystal-clear voice of sanity emerged from a sea of fragmented thoughts, and it soon became the only thing I trusted in my racing mind. I booked a plane ticket to Iquitos, Peru,

and headed to the airport two days later.

Ayahuasca is a non-addictive tea containing the potent psychedelic chemical N,N-dimethyltrypt-amine (DMT), which is also a human neurotransmitter. The ayahuasca vine (*Banisteriopsis caapi*) is combined with leaves from the shrub *Psychotria viridis* (or other DMT-containing plants) to create the transformative tea.

The word ayahuasca translates as "vine of the dead" or, better, "vine of souls"—so named for its ability to allow its user to absorb wisdom and healing from ancestors and plant spirits. This powerful brew induces intense introspection and hallucinations that last for approximately eight hours. Vomiting and, occasionally, diarrhea—which the natives

call la purga (the purge)—are a normal part of the experience. The healers refer to this process as "getting well," because one is clearing the body of negative energies and emotions, worms, and other parasites.

"Ayahuasca is the quintessential holistic medicine that works to heal the body, mind and spirit," says Don Howard Lawler, a master ayahausca healer who has worked with the medicine for over 20 years.

"Some people come for physical healing; others come for emotional or psychological healing; others come for spiritual healing," Don Howard told me during a July 2014 trip to his Spirit-Quest sanctuary near Iquitos, where he says he's seen a recent influx of Westerners in search of the medicine. "Probably the most widespread need that people

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104 How Psychedelics Saved My Life High Times lanuary 2015

victims I'd interviewed over the years: a 13-year-old girl caught up in the child sex-trafficking trade; pelicans covered from head to toe in a thick sludge of oil from the Gulf spill; friends who'd been tortured or murdered while I was covering the revolutions overseas.

The souls line up before me as the spirit releases a loving breath of air that coats each being in a sparkle of light, removing their wounds and torture marks and transforming them into their former stronger selves, which then fly out of the *miloka* and fade away into the darkness.

I woke up the next morning feeling transformed by a new sense of mental freedom. The leaden chains of pain that I'd been carrying around for years had been cut loose and replaced with a fiercely grateful love in my heart that made me feel whole again. I couldn't explain what the hell happened to me the night before, but it deeply renewed my sense of spirituality and lust for life. After seven more equally intense healing sessions with ayahuasca in the jungles of Peru, the suffocating fog that had engulfed my mind finally lifted.

decided to learn as much as I could about these plant medicines. As a result, I spent the next year traveling the world in search of more healers, more teachers and more spiritual experiences through my earlier path of immersion journalism.

I was drawn to try psilocybin mushrooms after reading about a Harbor-UCLA Medical Center study which found that psilocybin improved the mood and reduced anxiety in terminally ill cancer patients. The ayahuasca had shown me that my main ailment was anxiety, and I knew that I still had work to do to cure myself.

Psilocybin mushrooms are not addictive or neurotoxic, and studies show that they reduce anxiety and depression and even lead to neurogenesis, or the regrowth of healthy brain cells.

After Peru, I visited Oaxaca, Mexico, where the Mazatecs have used psilocybin mushrooms medicinally and as a sacrament for hundreds of years. Curandera Doña Augustine served me a leaf full of mushrooms during a beautiful ceremony before a Catholic altar. As she sang her thousand-year-old songs, I watched the sun set over Oaxaca's mountain land-scape, and a deep sense of connectivity washed over my entire being.

Perhaps most astounding, the

mushrooms silenced the self-critical part of my mind long enough for me to reprocess memories without fear or emotion. The mushrooms enabled me to remember one of the most terrifying moments of my life: when I was detained at gunpoint in Bahrain while filming a documentary for CNN.

I'd spent many nights searching for memories of that day, but they had been ruthlessly repressed—trapped in my subconscious. I knew the memories still haunted me because any time I would experience one of PTSD's well-known triggers, such as loud noises, helicopters,



soldiers or guns, a rush of panic would flood through my body.

The psilocybin was the key to unlocking the trauma, enabling me to relive the detainment moment by moment from outside my body as an emotionless, objective observer, moving each memory from the "fear" folder to the "safe" one in my brain's hard drive.

Five ceremonies with psilocybin mushrooms helped me to finally cure my anxiety and PTSD symptoms. The butterflies that had made a constant home in my stomach have since flown away. sychedelics are not the be-all and end-all. For me, they were the key to opening the door to healing. I still have to work to maintain that healing through the use of yoga, meditation—sometimes in flotation tanks—and yearly trips to the Amazon for an ayahuasca ceremony. For psychedelics to be effective, it's essential that they are taken with the right mindset, in a relaxed and quiet setting conducive to healing, and that all potential prescription-drug interactions have been carefully researched—because it can be fatal

to mix ayahuasca with prescription antidepressants.

I was always blessed with an inquisitive nature and a stubborn determination to question authority. Had I drunk the anti-drug Kool-Aid and become convinced that all "drugs" are evil and have no healing value, I might still be in the midst of an endless losing battle with PTSD.

The very same world that glamorizes violence, commercialism, environmental destruction and suffering has outlawed some of the most profound keys to achieving inner peace. The War on Drugs has never been based on science; if it was, then two of the deadliest drugs on earth-alcohol and tobacco-

would be illegal. And people suffering from trauma have become the victims of this failed war and are denied one of the most effective ways to heal.

It's a human-rights crisis that psychedelics are not available for use by the general population. It's insane that governments worldwide have outlawed the very medicines that can emancipate our souls from suffering.

And it's time that we stop the madness. &

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January 2015 **High Times** The High Times Interview **109**



INTERVIEW BY CHRIS SIMUNEK

THE HIGH TIMES INTERVIEW

ORMER TEXAS CONGRESSMAN
RON PAUL, A THREE-TIME
PRESIDENTIAL CANDIDATE (ONCE
WITH THE LIBERTARIAN PARTY
AND TWICE WITH THE REPUBLICANS), HAS BEEN CALLED THE "INTELLECTUAL GODFATHER" OF THE TEA PARTY.
POLITICALLY, PAUL OFTEN FRUSTRATES
BOTH SIDES OF THE AISLE, AS SEVERAL OF
HIS CORE PRINCIPLES CAN FEASIBLY APPEAL
TO EITHER THE FAR LEFT OR THE FAR
RIGHT. HE IS ALSO A STAUNCH OPPONENT
OF THE DRUG WAR AND SUPPORTS THE
LEGALIZATION NOT ONLY OF MARIJUANA,
BUT OF ALL DRUGS.

IN 1961, PAUL GRADUATED DUKE University as a doctor of medicine SPECIALIZING IN OBSTETRICS AND GYNE-COLOGY; HE IS SAID TO HAVE DELIVERED OVER 4,000 BABIES AND HAS DESCRIBED HIMSELF AS "AN UNSHAKABLE FOE OF ABORTION." LATER IN THE 1960s, HE SERVED AS A FLIGHT SURGEON IN THE US AIR FORCE AND THE AIR NATIONAL GUARD. HE ENTERED POLITICS IN THE 1970s, shortly after the so-called "Nixon Shock," when then-President RICHARD M. NIXON CANCELLED AMERICA'S PARTICIPATION IN THE BRETTON WOODS MONETARY SYSTEM, ENDING THE DOLLAR'S ABILITY TO BE CONVERTED INTO GOLD.

ECONOMICALLY, PAUL BELIEVES IN FISCAL CONSERVATISM, FREE TRADE AND ABOLISHING THE FEDERAL RESERVE. IN THE 1980S, HE LEFT THE GOP AND JOINED THE LIBERTARIAN PARTY IN RESPONSE TO RONALD REAGAN'S DOUBLING OF THE NATIONAL DEBT. HE IS A CRITIC OF BOTH NEOCONSERVATISM AND AMERICA'S FOREIGN INTERVENTIONS AROUND THE GLOBE.

Now retired from politics, Paul spoke with *High Times* on the occasion of his recently launched "digital bully pulpit," Voices of Liberty (*Voicesofliberty.com*).



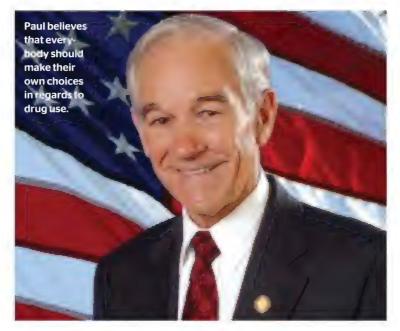
In the promotional materials for your new website, it says that you're "suddenly embracing technology to amplify the liberty movement." I was curious about the word "suddenly."

I wonder who put that word in there ... probably somebody in PR. It's not the way I would describe it—I've been talking about technology for a long, long time. I don't hardly ever give a speech where I don't talk about the Internet and everything else—and technology is what's going to allow us to compete with the government propaganda.

You recently came out as a supporter of Edward Snowden Why is that?

Well, mainly because I'm looking for the facts, and our government, I believe, distorts the facts. I've been particularly interested in foreign policy-I remember the Vietnam War, and I was in the service for five yearsand we generally find out by whistleblowers [such as Daniel Ellsberg] that, in reality, our government concocted that whole thing [i.e., the Gulf of Tonkin incident] and over 50,000 Americans died. And that's rather annoying.

And then being in Congress in the lead-up to the Iraq War, the lies that were told ... everybody knows they were lies, and yet a lot of human suffering came from that. So anybody who's willing to come forth and risk their own life and reputation to try to give us the story, as Edward Snowden did, I think they're very loyal people and should be recognized as such. I mean, we kind of pretend that we like whistleblowers, and the Congress offers them rewards and protection if they'll come forward, yet for the most part whistleblowers end up in big trouble. The CIA agent [John Kiriakoul that released the information to show how bad the torture was that was going on at Guantánamo-he ended up in prison. So I'm all



"The drug laws, I would just do away with them, because it's the prohibition of drug use that creates the drug gangs."

in support of people who will try to reveal the truth to the people.

Were you the only Republican who voted against the Iraq War?

No, there were six of us, and it turned out it was three conservatives and three who would be considered moderates. We had different reasons, but the rest of them went along with it. Neoconservatives are pretty domineering in Congress—they had pretty strong control, and they still do. And that's why you're hearing all the war talk now and the threats directed toward Russia. It seems like they're so insecure, they have to have a war going on all the time.

Would you say that the current situation in Iraq was predictable—that there eventually would be a civil war once we took out the power structure that existed there?

Oh, yeah, I think that was predictable. It was difficult to take that position [at the time], because it meant "You support Saddam Hussein." Right now, I talk about minding our own business and stop jumping to conclusions and trying to stir up a

fight with Russia, and they say, "Oh, Ron Paul is Putin's best friend." I mean, when I was in the presidential debates and trying to explain the facts, they said, "Oh, you take your orders from Osama bin Laden." So, yes, I think it was *very* predictable.

I had speeches where I said, "Watch out for terrorism" [as a result of US foreign interventions], because the phenomenon of blowback was well known and had been written about: The CIA explained it, and it's been going on for a long time. Actually, some of the blowback we have now with Iran started as a consequence of us overthrowing their government in 1953. So there are consequences—long-term military consequences—that are very real. You don't know exactly when and where and at what time it will happen, but there's a lot of resentment built up because of us throwing our weight around. And as long as we're the most powerful nation and the richest nation, we think we can get away with it. But I think that's starting to shift-and that's why we're going to be living in a more dangerous situation.

Let me ask you about foreign policy a little closer to home: Do you see a solution to the drug violence in Mexico? And are we the ones who are ultimately responsible for it?-

Well, we certainly cause a lot of it. You know, the drug laws, I would just do away with them, because it's the prohibition of drug use that creates the drug gangs and the whole [black-market] method of buying and selling drugs. So the drug gangs on the border are a consequence of our laws. The border problems are a little more complex than that, but that *is* a major factor in the problem: our drug laws.

But I think things are changing very, very gradually. I've taken a very strong position against these laws. Nobody thought I could get elected in the Bible belt as a Republican conservative, and yet people listened to me and didn't see it as a threat. And now look-especially because of the [changing views on marijuana], those people are saying that the drug laws don't make any sense! So we're really practicing a form of nullification, with the states just going about their business and changing the law and the federal government being forced to give up on it. And I think that's very, very good.

It doesn't mean that all drugs are going to be legal soon. They tried prohibition against alcohol and it was a disaster, and they then followed up with marijuana, so this stuff is going to be repealed. But that's not going to end the Drug War on our borders—it may slow it up a little bit, because [marijuana's] a major import. But I think we're moving in the right direction.

Also, I don't deal with it as a drug issue; I deal with it as a freedom-of-choice and selfresponsibility issue. Everybody gets to make their own choices, and they should suffer the consequences of what they do in regards to their personal



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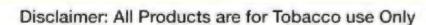








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habits as well as their economic activities. That's why I've been so interested in this issue, and have worked a long time with people like [former Senator] Barney Frank and others to try and get these laws changed.

Do you believe, as President Obama said recently, that marijuana laws are a states' rights issue, or do you believe the federal government should legalize pot across the board?

Well, they should just butt out-they shouldn't have been able to make it illegal [in the first place]. The government should be out of that business; they shouldn't have anything to say about it. So it's not so much that states are legalizingmarijuana should have been *naturally* legal. It's sort of like everybody has a right to drink raw milk, and then the government comes in and says, "Oh, no-only under our conditions." Under the Constitution, if a state made alcohol or marijuana illegal, it was not meant to be a federal issue. But that isn't the way it came about, you know: The federal government started writing the laws and enforcing the laws and causing all the trouble.

As the legalization of marijuana gains further acceptance—I think we're nationally above 50 percent now in support of legalization for recreational use—do you see more conservatives embracing this issue? Or are the so-called social conservatives still too powerful a voice for mainstream conservatives to embrace legalization?

Well, there's always going to be some in the resistance, but it certainly has changed. Even when we had votes over the years to soften the laws on marijuana, many of [the social conservatives] agreed with me, but they were like, "Huh-uh, I can't do that in my district—I'd be out in no time!" Because it would be held against them.

But you're talking politics, and now the majority of people are more open to the idea, so these politicians are going to feel more secure about [supporting marijuana-

"I'd pardon everybody who was in prison for a nonviolent drug crime."

law reform]—even those who believe there *should* be laws [against pot]. If they thought they *had* to vote a certain way, they would yield to the pressure in their district, they would shift—and that's why it's so important to put this pressure on the politicians.

In your view as a longtime member of Congress, what role do corporate interests—industries like, say, the prison industry or the pharmaceutical industry—have in crafting American drug policy?-

Oh, I think the drug companies are especially powerful, you know, and there are interests ... take the marijuana thing: I'm sure the alcohol industry has an interest in keeping it illegal. The private prison industry? Yeah, they like lots of prisons, so they're very influential. They never bothered with me, because they knew I wouldn't pay any

attention to them. But money's a big deal, and the drug industry especially—they were behind the prescription-drug programs that the Republicans loved. So there is always this financial interest that's very much involved, and it's very influential in Washington, there's no doubt about it.

But how does it work? Are lobbyists donating money to congressmen ...?

Yeah, that is it, and they just do a lot of behind-the-scenes stuff with [congressional] staff as well as with the members and their districts. If [these interests] can get various districts to support something, then they can orchestrate that. So if there's a voting bloc, then there's the threat: "Well, you better not cross us, because we're going to get somebody to run against you next time." So the member usually caves in.

Now that the laws regarding marijuana are changing, what do you think should happen to all the people who have been imprisoned under the old laws?

Well, I took a very strong position on that in the presidential race: I'd let 'em all go. I'd pardon everybody who was in prison for a nonviolent drug crime. Those who went overboard and committed crimes of violence, they need to stay in prison. But especially if it was personal use and that person was put in prison-or there was the tragedy of them going to prison for life because it was their third strike, even though they had never committed a violent crime-that is atrocious activity by our government. So I'd pardon them ... and save some money, too. 💥



WARNING: CANNABIS IS AN ACCUMULATOR PLANT...

Did you know Cannabis was used at the Chernobyl site to help pull radioactive contaminants out of the soil?

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It's a scary thought, isn't it? In short, cannabis, accumulates everything in its environment—including potential toxins—and retains them even after harvest.

in other words, whatever your plants accumulated while growing—you are now smoking. That's why you need to know how to protect yourself and your patients from potential medical marijuana toxicity.

The entire story, along with many other little-known, yet vitally important facts are nevealed in a new Bulgarian Academy of Sciences white paper titled:

"ELIMINATING HEAVY-METAL TOXICITY IN MEDICAL MARIJUANA, TO PRODUCE PATIENTS' MEDICINE SAFER THAN DRINKING WATER... WHILE RAISING BUD WEIGHT, THC, AND CANNABINOIDS"

The author of the white paper, Julian Karadjov, PhD, reveals facts medical marijuana grawers obsolutely MUST know. Here are just a few.

 The little-known fact that makes Cannabis totally different from other plants and why not knowing this can endanger the lives of your patients!

- Why the nutrients you feed your plants could actually be turning them toxic (make sure you check your bloom boosters for this one common ingredient that could be toxic)
- Exactly which heavy metals are toxic and how to protect your patients from ingesting them (there are some heavy metals that are completely harmless. Get the complete list inside!
- Surprising plant tissue sample results of Berlin, Hash Plant, and White Rhino strains of medical marijuana (goes completely against what most growers think is needed to maximize size, weight and potency!)
- The TRUTH about so-called "Pharmaceutical Grade" salls and chelates
- Why you can't trust regulators and other government "watch dogs" to make sure the hydroponics nutrients you feed your plants are safe

- The 2 biggest MYTHS about natural and synthetic chelators and their role is toxic metal absorption
- How to guarantee—with 100% confidence—that your medical marijuana is as pure and harmless as filtered drinking water.
- How the University of Mississippi achieved 21% more yield from their cannabis plants with one simple change to their feeding program
- How to nearly DOUBLE the amount of THC and other cannabinoids your plants produce the very next run you start (new test results from Hedron Analytical Inc.)
- As seen on TV: the dangers of medical marijuana cadmium poisoning (and how to help your patients completely avoid this risk!)

And there's more too... the dangers of "home brew" hydroponics nutrient formulations ... African marijuana cadmium dangers, plus other little-known facts most growers never hear about.

The bottom line is: If you grow medical marijuana and care about the safety of your patients at all for you use marijuana yourself) then you must read this white paper.

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Cultivation Clinic

Understanding grow mediums and CEC. By Nico Escondido





What Is CEC?

One of the biggest questions new growers have is simply what type of medium would be best for their plants. Of course, that answer depends a lot on the size of the garden space and the type of grow system being used. However, there are other considerations that are just as important. These center upon nutrient programs and how they relate to your medium's EC (electrical conductivity) or CEC (cation-exchange capacity), which, for our purposes here, are interchangeable terms.

The CEC of a grow medium pertains to its ability to hold minerals and nutrients "on call" for roots to absorb when needed. The CEC affects nutrient uptake by the roots in many ways, including the pH of your medium. Different mediums

provide varying layers of protection against the pitfalls associated with feeding your plants, such as nutrient burn due to low CEC levels.

Understanding mediums and their CEC can go a long way toward producing healthy plants. Generally, synthetic mediums have zero electrical charge and can be considered neutral. However, these mediums, such as rockwool or HEC (hardened expanded clay), incur a loss of buffering for the roots. This means that the roots are able to strongly absorb nutrients from the medium, which may sound like a good thing, but this can create big problems very quickly. The easy passage of nutrients to the roots can cause damage to the plant if the nutrient solution is not precisely mixed or if the pH levels are off slightly.

This is why synthetic grow mediums are generally only recommended for growers with years of experience in indoor growing, and who have intimate knowledge of the genetics they're working with.

Today, most growers-even those with plenty of experience-tend to go with soilless mixes for their medium. These mixes look and feel just like outdoor topsoil but are peat- or sphagnum-based. They have a much higher CEC and therefore do not release their mineral compounds as easily. This, in turn, provides more buffering within the root zone and makes for a much more forgiving medium. Small mistakes in mixing nutrient solutions or correcting pH levels will be less serious than if a medium with a low or nonexistent CEC is used.

CEC and Grow Mediums

As a guide for indoor growers, dirt soils have the highest CEC levels, ranging from 100 to 200 units. Of course, dirt soils are rarely used indoors these days and have been replaced by the soilless mixes mentioned. These mixes have CEC levels ranging from 50 to 75 units. They include mixes with peat moss, vermiculite, coco coir and sphagnum. Mediums associated with advanced hydroponic systems, such as flood-and-drain or DWC (deep water culture), tend to have CEC levels of zero and include mediums like perlite and rockwool.

The organic mixes from such name brands as Sunshine, Pro-Mix or Fox Farms are excellent mediums for indoor growers at any level of experience. These mediums offer excellent buffering and prevent problems with nutrient burn and overfeeding. They are also easier to keep pH-balanced, which will help ensure that your plants don't starve and can take in the available nutrients as needed. \checkmark

Featured Strain of the Month: **Hash Plant, 18.88% THC** We thought we'd do a throwback this to Afghanica or Afghani #1, Hash Plant differs only in her deeper, richer month and pull out something from our pile of overlooked classic flavor, which is less skunky strains. Hash Plant earned an and more hashy. Here in the honorable mention in our 40th-US, Hash Plant first appeared anniversary issue this Novemin Northern California, posber, just missing out on the sibly making her way down from BC. The latest versions list of Top 25 All-Time Greats. Still, she hasn't faded totally of Hash Plant may have a from the scene, as she backcross of sorts in her genetic mix, as she's known made a rare appearance at the 2014 Michigan to mingle with Northern Cannabis Cup last July Lights #5, another and tipped the scales at Afghan indica of great over 18 percent THC. taste and potency. She A truly remarkablehas a short flowering tasting flower, Hash Plant time indoors (45 days), takes her name from and does well both inside the Hindu Kush region of and out.

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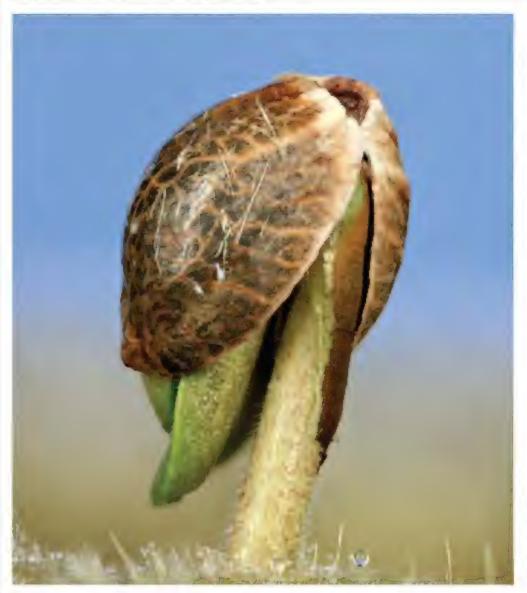
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The shell should eventually fall off your seedling.

SUBJECT **Seed Shells**FROM **Devin C.**

So I germinated some seeds using the paper-towel-in-a-Ziploc-bag method, but when I pulled them out, one of the seeds still had the shell attached. As I gently shook it into its hole, I noticed that one other had grown almost an inch and a half of roots, but the shell had already split and fallen off. Is this a bad thing, or will it still survive?

Dear Devin,

Your shell-free seedling should survive as long as you treat it gently. Very carefully place it with the taproot pointing down into your growing medium and loosely pack the medium around the root, being sure to leave the newly forming cotyledon leaves aboveground. These first two leaves to show up are more rounded than the ones that come later during

vegetative growth. Gently water your plant with pH-balanced plain water (you can add a bit of mild nutrient, but it's usually not necessary). Within a day or two, you should see new growth.

The opposite side of this question are seedlings that have trouble losing their shells. Sometimes plants begin to grow, but you'll see the shell still attached. Most seedlings eventually shed the shells on their own, but if you're worried about it or see that it's getting in the way of your plant's growth, carefully remove the shell with tweezers, being sure not to damage or cut the stem or root.

SUBJECT Genetic Drift FROM: Thomas B.

l've grown a few plants from seed, but after doing some research I now want to

grow from clones. I've heard that if I take a clone from a clone, etc., my strains will get weaker with each successive generation. I actually thought the opposite was true. Any help would be appreciated.

Dear Thomas,

The degradation of potency, scent and flavor that you're referring to is known as "genetic drift." I used to believe in genetic drift years ago, but not anymore. I've seen well-maintained clones produce strong cuttings over many generations. I now believe that what people refer to as genetic drift is actually caused not by taking clones of clones, etc., but by taking clones from diseased or generally unhealthy clones or mother plants.

If you're still worried about problems caused by taking clones from clones, start a female mother plant and take the clones from her. You can keep a mother plant alive in the vegetative stage for many years and never see the potency degrade, unless the mother plant suffers from stress caused by pests, over- or underfeeding, or light fluctuations.

SUBJECT: Spray It FROM: C. Money

I was wondering your opinion on spraying plants. Should I adjust the pH of the water in the spray bottle, or is plain water fine? Please advise. Thanks so much to you and Mike for your podcast, and for going around the world spreading the wonderful knowledge of cannabis.

Dear C.,

Thanks for the praise for our *Free Weed* podcast! We love to provide pot-growing information, and it's been a fun three years putting out the show. As for spraying plants, unless the pH of your water is really out of whack (under 5.5 or over 7.5), you should be fine without having to adjust it. You can even add a mild nutrient solution, as some of it will be absorbed into the leaves when you foliarfeed. Make certain that you spray the undersides of the leaves as well. If you're using a mild nutrient solution or neem oil as a pest spray, rinse it off shortly afterwards with plain water. And be sure not to foliar-feed after the second week or so of flowering in order to avoid causing mold to grow on or in your buds.



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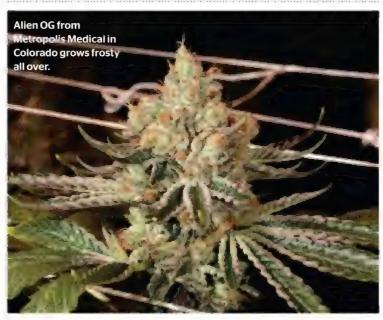
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Danko Tip: The optimal CO₂ level during the flowering stage is between 1,400 and 1,800 ppm (parts per million).



SUBJECT: Tea Party

FROM: C.

Hi, Danny! I have a question that I was hoping you could help me out with. I'm a big fan of true living organics (TLO), and I really like to let my dry nutrients bubble around in the reservoir. But people have been telling me to put them in some nylon pantyhose and drop it in like a tea bag. Wouldn't that be bad, because you're trapping the nutes?

dar khrur hirakh nair daran krani daran ahadarar khrur khrur khrur hirakh nanadan ar khodar kidab kanda mada

Dear CJ.

The reason people advise you to use a "tea bag" when brewing your compost tea is to avoid clogging any drip emitters, pumps or sprayers that you might be using. (If you hand-water your plants, it's not nearly as important to filter out the solids.) But the other thing to keep in mind is that most of the dry nutrients are released into your compost tea when you soak and bubble them, so the solids that remain don't contain nearly as much plant food as you might think: Most of the beneficial nutes have already been released into the solution. Much like brewing tea in a teapot, the essence of the dry products you've wet and oxygenated have dissolved into the water through osmosis and agitation.

SUBJECT Stretched Out

FROM: J. Blake

How do I prevent my seedlings (one to two weeks old) from stretching? My babies sprout and really stretch, to the point that I have to support them or else they're easily broken. I have them setting about 3 to 4 inches under a T8 bulb.

Dear J.,

The single biggest factor that causes plants to stretch is lack of enough light. You should consider placing your fluorescent light closer to your plants (within 2 inches from the tops) or adding supplemental lighting. You could also invest in a stronger high-intensity discharge (HID) grow light, such as metal halide (MH) or high-pressure sodium (HPS). These more intense lights



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should be kept further from the plants, but they'll provide many more lumens than your T8 bulb.

If supplementing or upgrading your lights isn't possible, then lower your T8 a couple of inches (you can raise it as your plants grow to avoid burning the tops), or else use training techniques such as pinching and topping to keep the plants shorter and less spindly.



Never allow light to reach plants in their dark cycle.

SUBJECT: Light Leaks

FROM Eric From Mass Cannabis Consulting

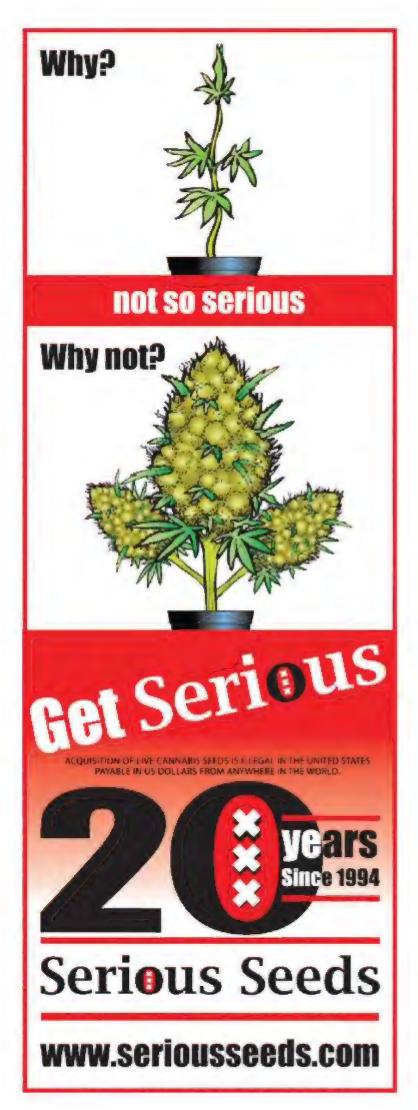
I'm an indoor grower, but I've always dabbled outside my whole life. I know that with indoor grows, light leaks will make your plants hermie. My question is for outdoor plants: Will they hermie from the light that escapes the windows and doors of my house? This is one of the nicest plants I've ever grown outside. I'm about three to four weeks into flower and we seem to be kosher, even though I'm sure it hasn't had a full 12 hours of uninterrupted darkness.

The door that leads outside is glass. We cover it, but there are still light leaks when we turn the light on inside at night. What are the possibilities that my plant could hermie? (It hasn't yet.) And do outdoor plants have a better tolerance for light leaks? Just wanted to pick the master's brain. Love the podcasts. Wish you and Mike the best!

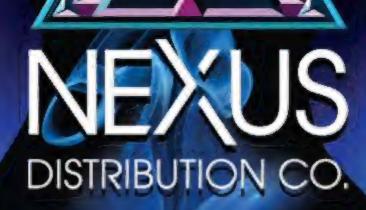
Dear Eric,

Thanks for your kind words! It's possible that your plant could react to light leaks by showing hermaphroditic qualities, but most likely it won't suffer this fate. The truth is that plants grown outdoors can handle and adjust to things like moonlight and dim ambient light from streetlights and such. Indoor plants find it tougher to adjust, because they're in complete darkness during their "night stage," which means that light leaks and other interruptions in the photoperiod affect them more strongly.

Think of your indoor plants as more sensitive due to the fact that they're coddled and kept in artificial conditions to which they've become accustomed. So the short answer is: Yes, outdoor plants have a better tolerance for light leaks. **







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Phat Facts
Tincture basics, potent teas
and cannabis carols.

Is putting the plant in the oven before making a tincture essential?

I.B. Russian

Hi I.B.,

All those stories about decarboxylation are true: In one study, researchers put the plants in an oven for half an hour at 290°F, and it cranked up the THC. (Though there's no such thing as a free lunch: The terpenes boiled off, too.) However, if you want THC-A—which has its own anti-inflammatory effects—then there's no need to decarboxylate. But if you want the most THC for your tincture, don't skip the oven.

What can I do to make my cannabis tea stay potent?

Earl Zinger

Hi Earl,

Even refrigerated tea loses its potency after a day or so, unless you add a powdered coffee creamer. Researchers used a standard three-gram package of creamer per cup of warm tea, and the THC levels stayed about the same for five days. But I'm reluctant to recommend white powders for health reasons; I think it's better to make less tea and drink it as you go.

I know you dig Cab Calloway's "Funny Reefer Man." Are there any other classic cannabis carols you would recommend?

Duke

Hi Duke

Louis Armstrong's "Muggles" (a popular slang term for cannabis in Satchmo's day) was actually recorded before the dreaded Marijuana Tax Act



Got a question for Dr. Mitch? Email him at 420research@gmail.com.

passed in 1937, so I get a big kick out of imagining what it was like to listen to a bluesy jazz tune back when cannabis was legal. And even though it's ambiguous, I've also always loved Ella Fitzgerald's "When I Get Low I Get High."

I'm extremely worried about petroleum hydrocarbons in cannabis oil. Has there been any research published?

Fossil Fool

Hi FF,

This topic isn't going to win either of us any friends on the concentrate scene, but one paper showed that naphtha and petroleum can both leave hydrocarbons in the oil. We don't know exactly how common or how dangerous this is, but it's something to consider. **

Dr. Mitch Earleywine, PhD, is a professor of psychology at SUNY Albany and the author of Understanding Marijuana and The Parents' Guide to Marijuana.

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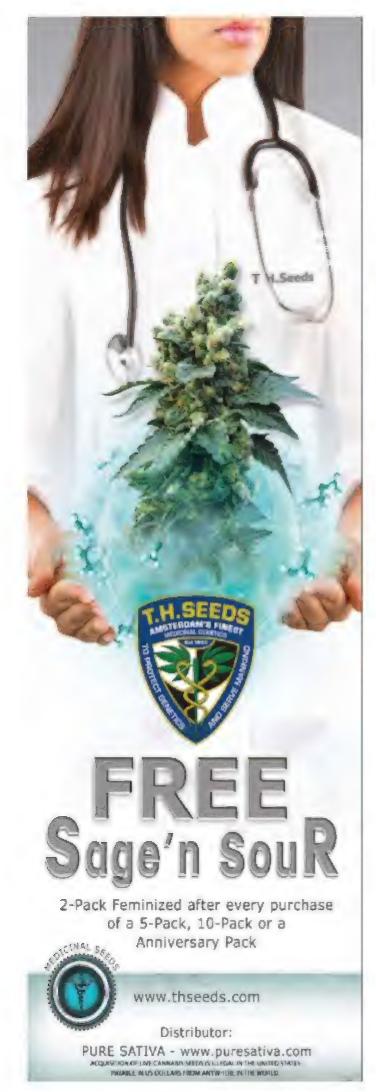
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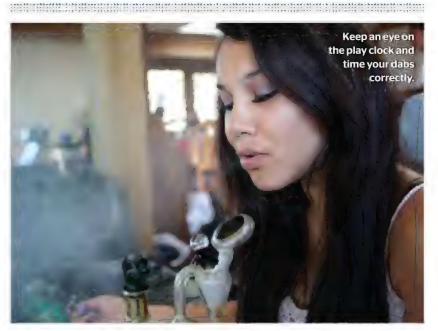
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Don't Fumble Your Dab!

When it comes to dabbing, there's only one big rule to keep in mind: Technique always wins.



I'm not the biggest football fan in the world. However, I do enjoy sitting on the couch, maybe eating some junk food, and dabbing liberally until the workweek is far out of my mind ... and watching sports is the perfect excuse to do that. So, for all of you "dab people" out there who enjoy a little football with your BHO, here are some suggestions for staying free from injuries and avoiding fouls during dab season.

Mitigating the Fumble

We've all been there: You've got your dab ready to go at the line of scrimmage, the torch is hot, your mouth is salivating, but something happens at the snap and you fumble your dab. Overreacting in a situation like this can cause injuries. If you see the loose ball, recover it quickly and continue with the play—but if it's out of sight, stay calm, let your torch cool and collect a new dab. Many dabbers in this situation overreact and burn themselves. The forehead burn is real and hard to explain, especially to non-dabbers.

Staying In Bounds

With all of the new nails on the market, it's sometimes hard

to tell exactly how one works. So if you're not familiar with a nail, ask. There's nothing more heartbreaking than having a dab of the finest BHO on your tool but forgetting to put the dome on before play begins and watching the vapor soar out of bounds.

False Starts

Another foul that can lead to minor irritation is the false start. Don't rush the heating with a torch: If a nail isn't at the right temperature, the dab won't vaporize correctly, leaving you with an annoying scratchy feeling in the back of your throat. On the flip side, hitting a red-hot nail can burn your throat and the hairs in your lungs, called cilia, that help filter out impurities in the air we breathe. So keep an eye on the play clock and time your dabs correctly.

With these pro tips in mind, enjoy the coming weeks of gridiron action and keep yourself safe for dab season—one, thankfully, that will never end.

Josh Shipman is the resident grower for Fremont County Cannabis in Colorado. He specializes in organic horticulture.













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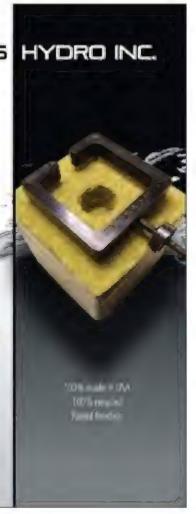
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Coast Riders Pt 1: Miller Time

A Pacific pilgrimage to the shrine of my favorite author.

Blazin' in Big Sur

hen our Miss *High* Times 2007 Sarah asked my wife April and me to emcee her wedding in LA last August, we decided to spend the following two weeks driving up the Pacific Coast to Portland. Among the many scenic vistas and tourist traps along our way, the attraction I was most excited about, ironically, was

"the place where nothing happens"—the Henry Miller Memorial Library in Big Sur.

Originally from Brooklyn (like me), Henry Miller spent the 1930s in

France and Greece before driving across America and finally settling in Big Sur, where he lived for two decades and penned Big Sur and the Oranges of Hieronymus Bosch in 1957. The library—originally the home of his friend Emil White-was dedicated to Miller after his death in 1980 and has since served as both a memorial and a nonprofit arts center, hosting numerous festivals and concerts on its grounds.

In fact, there was just such an event happening when we arrived there that evening. The kindly young wook working the door informed us that the funky grooves we heard pouring from within were coming from the band Foxygen, that the concert was part of the Woodsist Festival, and that-much to my dismay-it was sold out.

"Sold out?!" I exclaimed as I peered into the yard. "Seriously? There's hardly anybody in there!"

"I'm sorry," Chewy Jr. replied, "but there are no more tickets available."

"Listen ... we may never be back here again, and Henry Miller is my favorite writer ... if I can't see his memorial, I'm gonna be heartbroken. Can we just go into the bookstore maybe?"

He obviously sympathized with my situation, but wasn't budging.

I had but one card left to play-my High Times business card.

"Look, I'm gonna level with you: I'm an editor at High Times magazine, and I was planning to write about my visit here. If you don't let me in, I'll have no story for our next issue. If you can find it in your heart to hook us up with a wristband, I promise to return the favor at one of

> our Cannabis Cups. What do you say?"

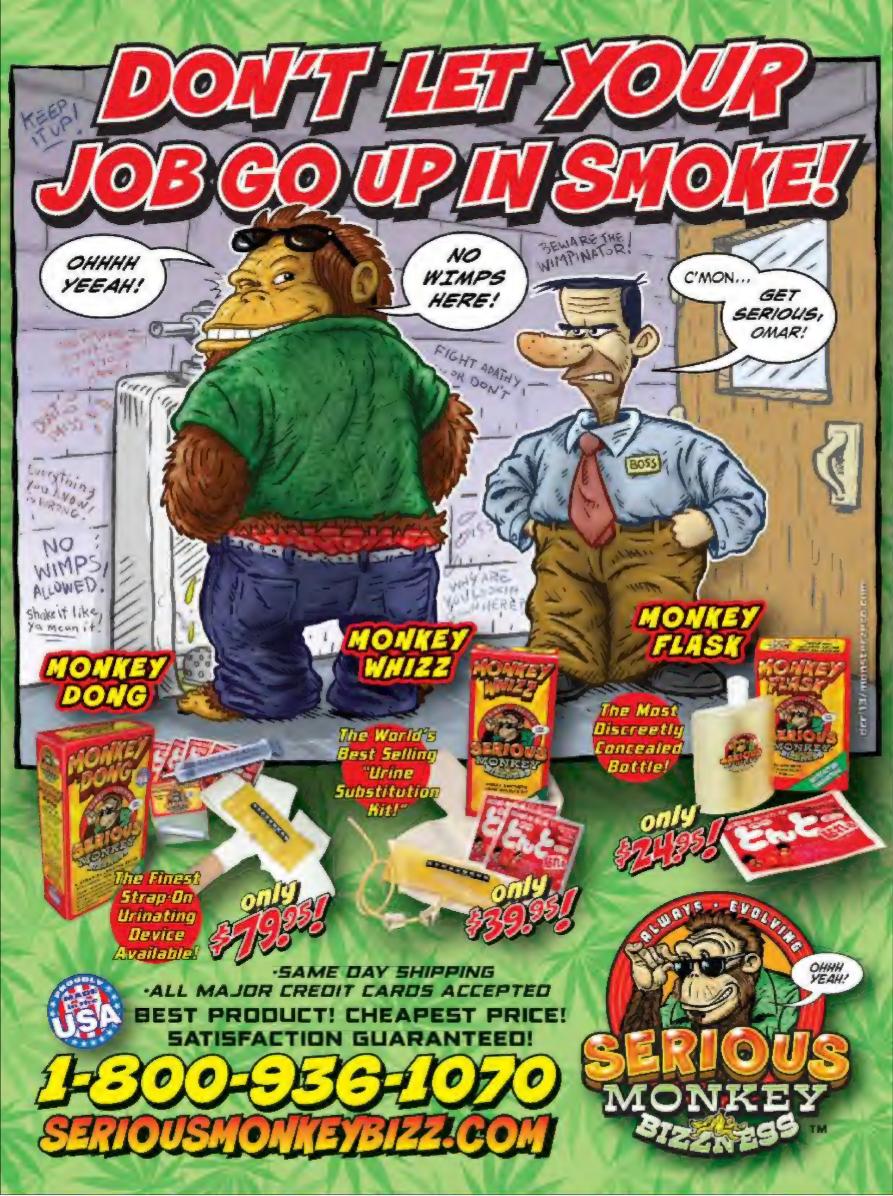
After a moment of conflicted contemplation, he turned to me with a smirk. "Okay-give me your wrist."

After a profu-

sion of gratitude, I made a beeline straight for the bookshop. Inside was a mini Miller museum, filled with a plethora of his personal artifacts: paintings, typewriters, even a framed rejection letter from Random House for his book Black Spring-further testament that genius all too often goes unrecognized in its time. After soaking it all in and picking up a few souvenirs, we headed back out to catch a few songs from hipster-groove band Real Estate. We watched them (and the '60s-style psychedelic light show playing behind them) just long enough to finish a joint, then headed out.

Early the next morning, as we once again went winding northward along the cliffs of Highway 1 through a creeping curtain of fog, I took a deep toke, whipped out my copy of Big Sur and began reading aloud to April from its inspired introduction:

"From the ocean depths there issued strange formations, contours unique and seductive. As if the Titans of the deep had labored for aeons to shape and mold the earth At dawn, its majesty is almost painful to behold. That same prehistoric look. The look of always. Nature smiling at herself in the mirror of eternity." 쌅





What About the Adults?

Let's not make children the crux of the legalization debate.

Allen St. Pierre is the executive director of NORML. Visit norml.org

ince the 1970s, the refrain has been sounded time and time again by the anti-cannabis movement, whose only response to any proposed marijuana-law reform has been: But what about the children?

Well, what about them? Over the last few years, the parents of seriously ill children have increasingly sought cannabis products as medicine, regardless of their illegality. And who can blame them? When a sick child doesn't respond positively to conventional treatments, that child's parents will desperately seek alternatives. But as long as cannabis remains illegal under federal law-and with virtually all medical marijuana research being rejected by the Feds-the question "What about the children?" has taken on a whole new meaning.

This past spring, over a dozen otherwise conservative state legislatures have passed so-called "CBD-only" bills, which were driven by a dual narrative: that this emergency legislation was needed to save children's lives, and that CBD-only products aren't psychotropic and don't get their users high.

But while these conservative lawmakers—normally so averse to entering into so much as a discussion about cannabislaw reform, let alone enabling children to use pot medicinally—were quick to enact this legislation, they were selling their



constituents a bill of goods, since no CBD-only products are available in their states. Indeed, CBD, like THC, remains a Schedule I drug under the Controlled Substances Act—totally prohibited on the federal level from any lawful use.

As we have seen, prohibition has never prevented youthful experimentation with marijuana, although it has greatly deterred research into its medical benefits. That's why making children

the crux of the legalization debate is a serious mistake. As has been amply demonstrated over the last 80-plus years, cannabis prohibition is a destructive and ineffective social policy—one that should be immediately ended in the United States. It is time for us to implement free-market alternatives that will better serve adults and children, as well as medical marijuana patients and society at large. 💥

FREEDOM FIGHTER

Justice for All

misdemeanor pot busts.

By Erik Altieri, NORML communications coordinator

Delaware's Tom Donovan offers free legal representation for

Attorney Tom Donovan is putting his money where his mouth is when it comes to helping end cannabis prohibition in his home state of Delaware-and, hopefully, the rest of the country. Donovan, 41, pledges to represent any individual charged

with the misdemeanor possession of

marijuana in Delaware for free until

the costly and racially biased policy of cannabis prohibition ends.

Donovan has been opening approximately one new pro bono file a day. "I work with great people who are just as dedicated as I am," he says. "We're a team, and I couldn't do this work without them. I can see this movement is growing, and we plan to grow right along with it."

A member of the Delaware bar

since 2000, Donovan focuses on the needs of indigent and low-income clients charged with all manner of criminal offenses, including cannabis possession, "It's a

natural step for me," he says. "When I see an injustice levied against any group of individuals, I'm going to speak up. My clients definitely look to me to bring justice to the table. I'm their voice-sometimes I'm their only voice. It's high time I helped out to

end a failed and destructive policy"

In addition to his legal practice. Donovan is a member of Delaware NORML, the National Association of Criminal Defense Lawyers and the Cannabis Bureau of Delaware, and he also serves on NORML's legal committee. Next on his agenda: launching a nonprofit foundation to educate and unite other attorneys across the country interested in ending cannabis prohibition and defending simple possession cases pro bono.





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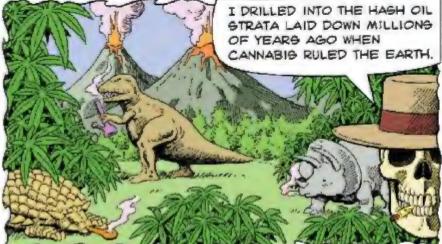


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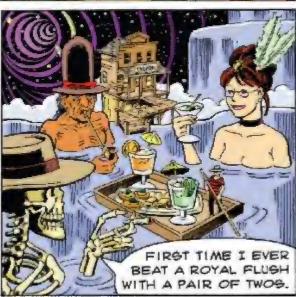




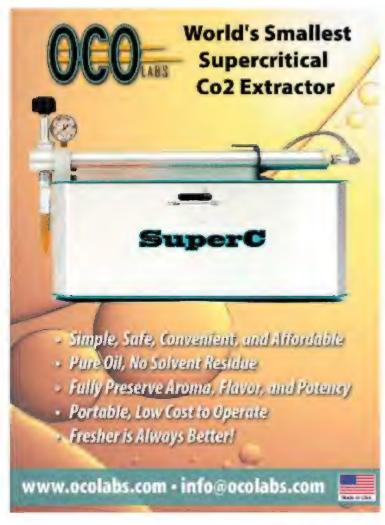














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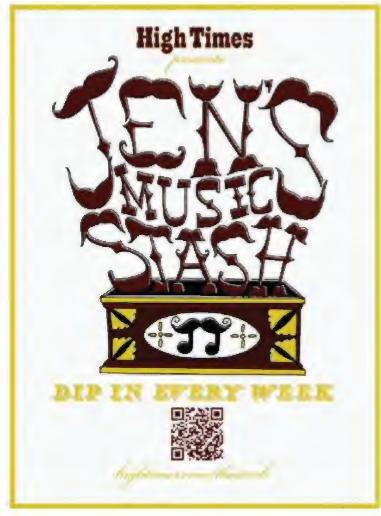


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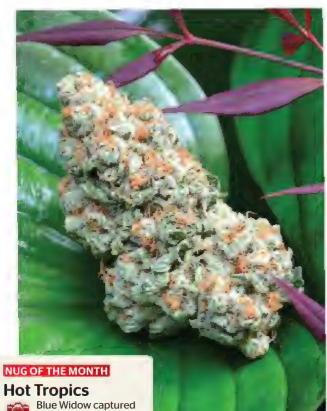
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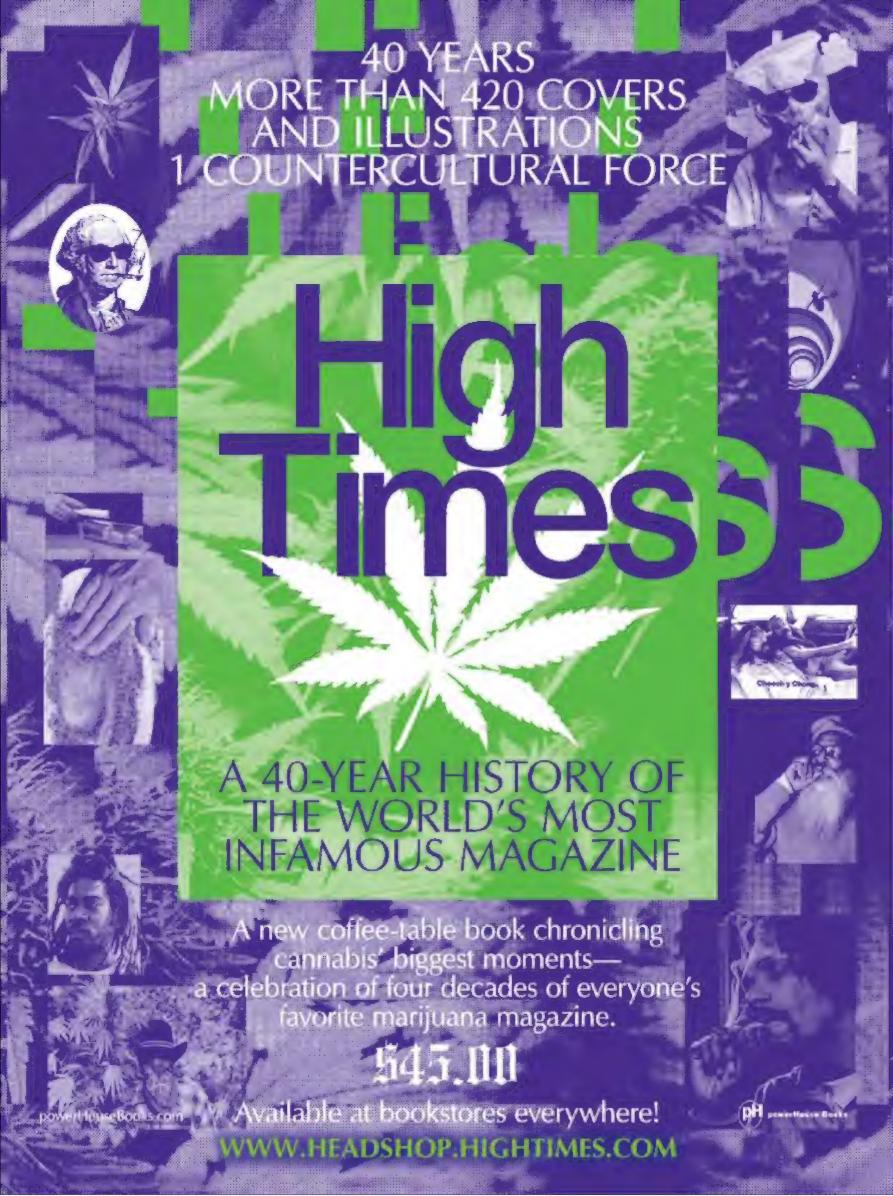
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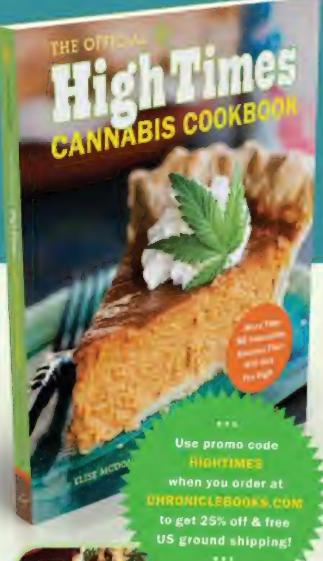


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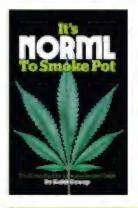
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